

# THE AUTOMOBILE

WEEKLY

NEW YORK—SATURDAY, APRIL 1, 1905—CHICAGO

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# THE AUTOMOBILE

VOL. XII.

NEW YORK—SATURDAY, APRIL 1, 1905—CHICAGO

NO. 13

## SELF-PROPELLED PASSENGER COACH.

THE advantages of the internal combustion motor as a prime mover for railway cars are beginning to impress themselves strongly on those who have charge of railway motive power departments; and the first serious tests in the United States of a railway passenger coach driven directly by a gasoline motor are being carried out by the Union Pacific Railroad Company at Omaha, Neb. The new

and pick up speed rapidly and without jar. Slight changes were made in the construction of the motor to adapt it to the new conditions; but substantially it is the regular Standard motor. An ingenious system of piping serves the double purpose of cooling the jacket water of the motor and heating the interior of the car in cold weather. There are two complete pipe systems, one within the car and the other underneath;

inch wheels, are used on the motor car, and a method of spring suspension was worked out with a view to eliminating the rocking motion frequently set up in electric motor cars when traveling at high speed. The coach, as a whole, is of exceedingly strong construction.

In order that it may be kept in a hygienic condition, particular attention has been given to facilities for ventilation and clean-



RAILROAD PASSENGER CAR FOR LOCAL TRAFFIC AT PORTLAND, ORE.—EQUIPPED WITH SIX-CYLINDER STANDARD GASOLINE ENGINE.

coach, which is illustrated herewith, will be used for local passenger service at Portland, Oregon.

A six-cylinder gasoline motor built by the Standard Motor Works, of Jersey City, N. J., furnishes power to drive the car easily at 40 miles an hour, according to the calculations of the designers, and power is transmitted to the wheels in the simplest and most direct manner possible. For starting the motor the compressed air apparatus, which is a feature of the Standard marine motors, is used, and the car is said to start

by means of a valve the water may be circulated through either, or partly through one and partly through the other, so that the degree of heat in the car may be regulated to a nicety. Compressed air is used not only for starting the car and handling the brakes, but also for opening and shutting the car doors and lowering and raising the step from the driver's compartment. This arrangement is conducive to the safety of the passengers, as the driver will not open the doors until his car has stopped.

Specially designed trucks, with forty-two

ing. There are several Cottier ventilators in the roof, and these act as exhausters, drawing the vitiated air from the interior. Fresh air is admitted through a number of small openings, so that no draught is caused; and in winter the incoming air is heated as it enters the car. To facilitate washing, the floor of the car is made water-tight, and can be flooded with hot water and thoroughly cleansed. Seats are upholstered in leather, and the interior finish is made as smooth as possible to facilitate cleaning.

Seating capacity for twenty-five passen-



gers is provided. Acetylene gas is employed for illumination, the burners being placed in opalescent panels, giving a clear light, but one that is soft and comfortable for the eyes, casting no heavy shadows. The panels are so arranged that the light comes over the shoulder of the passenger, who is thus enabled to read in comfort. A powerful acetylene headlight is provided at the front of the car.

The front of the car is tapered to a sharp, air-splitting shape, resembling the bow of a boat, while the rear end is rounded to avoid as much as possible the retarding effect of suction. The roof curves down to meet the body of the car in lines calculated to offer the least resistance to the air; the entire car is built with a view to obviating air resistance. It will be noticed that the familiar deck sash ventilators are not used.

The Union Pacific Railroad Company designed and built "Motor Car No. 1," as it is called, at its shops at Omaha, the work having been done under the supervision of W. R. McKeen, Jr., Superintendent of Motive Power and Machinery.

## Foreign News Notes.

### Special Correspondence.

LONDON, March 20.—That most intrepid chauffeuse, Madame du Gast, will steer a 90-horsepower Pitre boat fitted with a Charron-Girardot engine in the Algiers-Toulon race.

The Austrian A. C. has postponed its motor-boat races in the Danube until May 14. A large foreign entry is expected.

Two striking events of the Austrian Automobile Club will come to naught this season. The one is the classical Exelberg race, which will fall away forever, as the entries for cars decreased annually, swallowed up by the motorcycles, and the other is the intended Vienna-Berlin tour. In its stead the club will promote a Vienna to Breslau and back touring competition to start on May 17.

It is interesting to note that the horses of the different London 'bus companies are being regularly put up for sale at the various auctions of horses held in the metropolis and its vicinity. The London Power Omnibus Company, which recently published its prospectus, has among its directors George Montagu, M.P., and Captain Deasy; the capitalization is \$1,000,000, while that of the London and District Motor 'Bus Company runs into \$2,250,000. This company will work co-jointly with the London Motor Omnibus Co. London is having a plethora of motor 'bus companies and the rumbling horse-drawn vehicles will soon be relegated to the past to give way to more commodious, better ventilated, faster and surer motor omnibuses.

An automobile school has been established in Dayton by the Young Men's Christian Association, and instructions are given regularly on the management of machines propelled by electricity and gasoline.

# General Suggestions for the Operation of Gasoline Runabouts or Touring Cars.\*

By A. D. RIVER.

## Running a Car with Sliding Gear Speed Change.

AS the preceding article on running a car with individual clutches contains a number of incidental remarks on the general theory of motor management, and, moreover, as such a car is simpler to run than one with sliding gears, a perusal of that article will form a very good introduction to the present one. The reader with a car of motor-in-front type will do well to read it over carefully for the sake of the general information it contains.

It will here be assumed that the preliminary work of inspection, filling of tanks and lubricators, examining spark plugs and batteries, and tightening of nuts, has been gone over, as indicated in the previous article. Consequently, we will begin with the actual starting of the motor and the car.

### TO START THE CAR.

*To Start.*—Set the emergency brakes by the lever at the side. See that the front wheels point straight ahead, and bring the gear shaft lever to the neutral position. This neutral position, if all of the forward speeds and the reverse are operated by the continuous motion of one lever (the "progressive" system) is between the reverse and the first, or slowest forward speed, and is indicated by the second notch in the sector, counting from the back. If the car has four forward speeds, these and the reverse are frequently operated by one lever, worked in an H slot (the "selective" system) in the sector, by which it operates two or three speeds in one slot, and the others in the other slot. In this case the neutral position is in the gap connecting the two slots.

In either the "progressive" or "selective" systems the neutral position may be found in the following manner: Take off all brakes. Put the ignition system out of action, so that when the motor is turned by hand it will not start running. Put the gear lever in the position which is supposed to be the neutral one, and turn the motor over slowly by hand. The car will then move ahead or back, depending on the position of the lever, if the latter is not in the neutral position. Should the car not move at all, the lever is already in the neutral position.

### RETARD IGNITION SPARK.

Resuming the operation of starting, retard the spark to its latest point, and turn on the gasoline valve leading to the carbureter. Set the throttle or governor control lever about one-third open, so as to give a fairly slow engine speed. Prime the carbureter. Open the relief cock. Close the switch, if there is one. Turn the crank

two or three times and the motor should start. If it fails to start, follow suggestions for this contingency in the preceding article. After the motor starts advance the spark slightly and turn on whatever oil feeds do not work automatically.

On taking your seat, press down the clutch pedal, and shift the gear change lever to the first speed (usually the first notch forward of the neutral position). Give the motor a moderate increase of speed by the throttle or governor control and spark lead. Release the emergency lever and let the pedal come up slowly, releasing the service brake and engaging the clutch.

On some cars the emergency brake lever and the change-speed lever are mounted on tubes arranged telescopically. On such cars it will be sometimes found that if the hand brakes are put on forcibly, the distortion or spring in the concentric tubes just referred to will cause the latter to bind, and make it difficult, and sometimes impossible, to move the gear lever. Consequently, when about to start the car, the emergency brake should be applied, with only enough pressure to hold the car and to take the clutch out, if the latter is interlocked with the hand brake.

### IF GEARS DO NOT MESH.

If, in starting the first speed, gears fail to mesh readily, let the clutch pedal come up until the friction surfaces of the clutch barely touch, and immediately press pedal down again. This causes the first gear shaft to rotate slightly, and the gear can then be engaged without difficulty, so long as this shaft is moving. After engaging the first gear, proceed as already suggested.

When the car has started, let it come up to the speed normally given by the first gear before changing to the second. To this end, open the throttle slightly and advance the spark till the motor reaches the maximum speed allowed by the governor.

To engage the second speed, press down the clutch pedal and shift the gear-changing lever quickly to the next notch. Never allow the gears to grind together before they engage. This betrays lack of skill, and it is also injurious to the gears. On no account attempt to change gears, either from low to high, or vice versa, without first releasing the clutch. If you make this attempt and there is no self-locking device to prevent you, you will probably damage the gears. After meshing the gears, let the clutch engage quickly, yet gently, before the motor has time to gain speed during release.

### RUN ON HIGHEST GEAR.

As remarked in the preceding article, it is always best to run as much as possible on the highest gear that the motor will carry without laboring, and to regu-

\*Concluded from issue of March 11, 1904, page 357



late the speed by the throttle or governor control and by the spark. The lower gears will be used chiefly in starting, in climbing hills, and when, for any reason, it is necessary to run the car very slowly.

To stop the car, simply press down on both pedals. For a quick stop, press on both pedals and apply the emergency brakes by the side lever, taking care to do this, not abruptly, but as gradually as conditions will permit. Always avoid abrupt starting and stopping. If the road surface is slippery it is dangerous, and if the road surface is dry it damages the tires. After stopping, always bring the gear-changing lever back to its neutral position. This removes the possibility of your trying to start again in the wrong gear, and the risk of the investigating small boy starting the car for you if you leave it with the motor running.

#### METHOD OF REVERSING.

To reverse, first bring the car to a full stop. Then release the brake, if applied, and shift the gear lever to the reversing position. Engage the clutch as slowly as possible, as this gear is apt to be sensitive to rough treatment. If the gear fails to mesh readily, follow the proceeding already indicated for engaging the first speed gear from the neutral position. With practice you will learn to shift to the reversing gear before the car has actually stopped, thus avoiding the chance of failure to mesh; but do not try to rush this part of your education, nor attempt to apply the clutch till the car has ceased moving ahead.

The running instructions in detail will depend somewhat on the particular character of the engine control. Nearly all cars of this type are equipped with a centrifugal governor on the motor, by which the latter is prevented from exceeding a predetermined speed, which may be fixed by the operator. This governor acts on the throttle valve, and the motor speed at which it closes the throttle is usually determined by the application to the governor of an auxiliary spring, whose tension may be regulated by hand.

Sometimes, however, there is no auxiliary spring, but instead a device by which the operator may open the throttle valve arbitrarily, regardless of the action of the governor. When this latter device is used, it is commonly actuated by a small pedal next to the brake pedal, and known as the accelerator pedal. The governor control by auxiliary spring is commonly actuated by a lever on the steering column or steering wheel, in close proximity to the lever for regulating the spark lead.

#### THE ACCELERATOR PEDAL.

Occasionally both of these devices are used, the purpose of the accelerator pedal in this case being to give the motor a quick increase of power, when this may be desired to take advantage of an opening in traffic or the like, without disturbing the regular setting of the governor.

Whatever the arrangement for accelerating or speeding the motor, it should never be left in action when the clutch is disengaged, as this races the motor and racks the transmission gearing when the clutch is re-engaged. Sometimes, to be sure, it may be necessary to resort to the expedient of speeding the motor and "jumping" the clutch in order to get the car out of a hole or over an obstacle in the road, but this is only to be done in cases of emergency.

If an accelerator pedal is used, a good rule is to remember that it is to go up (retard) when the clutch pedal goes down (release). Conversely, when the car is running at a good speed, the motor should not be abruptly retarded by the throttle without throwing out the clutch for the moment, as otherwise the car will propel the motor and may cause back-firing in the inlet or induction pipes. The clutch pedal, therefore, should momentarily go down when the accelerator pedal comes up.

#### PEDAL CONTROL SYSTEM.

It may here be remarked that the pedal control system lends itself very well to rapid dodging and threading through crowded streets, for the reason that the car may be slowed down, not by closing down the motor, but by disengaging the clutch, allowing the motor to run on the governor at its predetermined speed. Then, when an opening presents itself, the clutch is engaged, and the car jumps quickly forward under the impulse given by the momentum of the rapidly turning flywheel. The difference in rapidity of movement between a car whose motor has to accelerate the flywheel as well as the car, after a slow down, and one which can borrow momentum of a flywheel already in rapid motion, is very noticeable.

Of course, it will be understood that this method of handling the car is to be used with judgment, and is not supposed to take the place of control by throttling where the conditions are such that the latter will answer the purpose.

In dropping from a high to a low speed on the level, it is possible to release the clutch and disengage the gears while the car is running at the speed normal to the higher gear, then to retard the car by the brake before engaging the lower gear, in order to secure the needed difference in speed between the shafts. If this is properly done the gears will slip into mesh very easily. However, this manœuvre is seldom practised, the usual method being simply to shift the gears as quickly as possible.

#### BEFORE THE CAR HAS STOPPED.

It is always best before stopping, if it is necessary to pass through the intermediate gears to reach the neutral position behind the first speed, to pass through these successively as the car slows down, this being much easier than to pass through them after the car has stopped.

The beginner with a car of high power will do well to give himself two or three

days of practice in the foregoing points, especially turning and reversing, before he attempts to handle the car in traffic. The habit of steering straight is also an excellent one to acquire, as a "wobbly" style of steering is very irritating to other users of the road, who have no means of judging in what direction you intend to go.

Particular attention should be given to the matter of avoiding and controlling the phenomena of skidding. This freakish and dangerous antic of the car, which consists in starting off at a tangent on a wet pavement, and possibly turning around before stopping—if by good luck the curbstone or another vehicle is not struck—may be avoided by driving slowly wherever the road surface is wet, and by religiously avoiding all abrupt turns and sudden applications of the brake. It is well also to release the clutch when making a turn, so that no driving power is being applied to the wheels, and the car simply coasts smoothly. To slow down, also, use the throttle, where possible, rather than the brakes, and in general aim to drive as if you had no brakes at all.

It is a good plan to run as close to the curb as practicable, so that if a slide slip should occur, the car will not have time to gather momentum before it strikes the curb, providing it skids in that direction. Never change gears on a slippery pavement if you can help it. If you must do so, engage the clutch very carefully.

#### TO CONTROL SKIDDING.

Skidding may be controlled, when it occurs, by turning the front wheels in the same direction in which the rear wheels (which are almost invariably the ones to slip) start to slide. Thus, if the rear of the car suddenly swings off to the right, the front wheels should be turned to the right, which likewise deflects the front of the car in the same direction. This equalizes the lateral movement fore-and-aft, and may be compared to the process by which the cyclist keeps himself upright by slight changes in his direction.

When you encounter a dry, sandy road, drive in the ruts, which are packed, and do not attempt to drive fast, especially if the road is narrow. It is very easy to overturn a car in this loose and treacherous material. Never on any occasion coast downhill into a sandbed at the foot. If you slew at all you may upset before you have time to think.

Never approach an unknown turn at speed. It may be sharper than it looks. Never drive at night so fast that you cannot stop your car within the distance lighted by your lamps. Owning an automobile does not make a reckless man careful, and when an accident happens, the chances are that it is the driver's own fault.

In driving the car about streets on which electric cars run, look out for sharp edges on the rails which may damage the tires when crossing the tracks. There are frequently sharp edges and points about the switches that are capable of gashing a tire.

## French Racing and Technical Competitions.

### Entries and Preparations for Gordon Bennett Kerosene Carbureter and Road Wheel Trials—Hill Climbing Events.

*Special Correspondence,*

PARIS, March 17.—The period of discussion on the Gordon Bennett question is now past. Foreign clubs are satisfied, the entrance fees have been returned to the French constructors, and the old engagements canceled. Thus an entirely fresh start has been made, and we are now in the full swing of preparations for the great event. Entries do not close for the French preliminaries until April 1, but already six firms have re-engaged as follows:

| NO. OF CARS. | MAKER.                       | DRIVER.                             |
|--------------|------------------------------|-------------------------------------|
| 1            | Charron, Girardot and Voigt. | Girardot.                           |
| 3            | Panhard and Levassor.        | Heath, Teste, Henri Farman.         |
| 1            | Gobron.                      | Rigolly.                            |
| 3            | Richard Brasier.             | Théry, Caillois, Stead.             |
| 3            | Clement Bayard.              | Albert Clement, Henriot, Villemain. |
| 3            | Darracq.                     | De la Touloubre, Hémerly, Wagner.   |

It is certain that two firms, Mors and De Dietrich, will not enter again, although both have built racing machines, but these are the only two likely to abstain.

Although the Auvergnat circuit is at the present time in an almost impracticable condition, owing to the bad weather and heavy falls of snow, great activity is being displayed in the district. Two of the delegates of the Automobile Club of France left Paris this week for Clermont in order to organize the circuit. The Auvergne Automobile Club is working hard to make this year's race a big success. Guide posts have been placed wherever necessary on the course, and posters have already been put up advising the country people how to act in order to prevent accidents, and also giving advice to drivers of cars. In running over the course a certain direction has been marked out, in order to avoid danger from crossings. The sporting committee recognizes that ordinary horns are not sufficiently powerful for racing cars, and, after experiments, has advised competitors in the preliminary races to equip themselves with sirens, as being the only form of instrument capable of being heard by a preceding chauffeur. The sirens will not be taken account of in the weighing of the cars. As yet the exact dates of the races have not been fixed; the preliminary race will be run between June 10 and 15, as is found most convenient locally, and the Gordon Bennett race about the end of July.

The total money prizes for the preliminary races amount to \$28,751.

President Loubet will, in all probability,

be unable to be present at the race. M. Rouvier, minister of finance, has, however, accepted the invitation of the Automobile Club of France, and M. Dubief, minister of commerce, will doubtless do likewise.

In conformity with the recommendation of the Automobile Club of France, the minister of the interior has decided not to grant permission for any road race this year other than the Gordon Bennett and the preliminary race. It is announced in certain quarters that next year the Automobile Club of France will organize its annual road race on the Aix-les-Bains circuit. This refusal to grant permission for the holding of road races does not mean that all auto tests will be stopped; as an indication to the contrary, the regulations have just been formed for the new De Caters cup, and permission granted for the Chateau-Thierry and Gaillon hill tests. Touring events, reliability trials, brake tests, etc., will still be permitted, and only big races in which speed is the prime factor will be forbidden.

#### DE CATERS CUP REGULATIONS.

Full regulations for the cup founded by Baron Pierre De Caters have just been published. As the object of the baron is to encourage the development of a perfect type of touring cars, the regulations have been carefully drawn up towards that end. The cup will be competed for by teams chosen by the national clubs, the number of entries being fixed according to the productive capacity of the country, but for this, the first year, is fixed at two cars for each factory; and the entire car must have been constructed in the country which it represents.

All cars entered must be of standard type, built in a series, and not especially erected for the race; they must have four seats, each of which shall be occupied by a passenger weighing not less than 70 kilos (150 pounds), or, if not occupied, an equivalent weight must be carried in lead. The minimum weight of the chassis must be 1,000 kilos (2,204 pounds), and the body 200 kilos (440 pounds). Side entrances must be provided, lamps, cushions, etc., fitted, and the comfort of the car be to the satisfaction of the committee. The cylinder capacity must be between 5 and 61.2 liters.

The length of the course will not be less than 250 nor more than 312 miles, to be run in one stage. Each year the club holding the cup will choose the course and publish full particulars regarding it by the first of January, the race being run between July 1 and October 31, if possible. This year the circuit will be chosen before July 1, and entries must be made before May 1. The holding of the cup is similar to the regula-

tions for the Gordon Bennett race, and a reproduction in miniature will be offered to the builder of the winning car. Entrance fee for each car is fixed at \$100. The entrance fee will be pooled, and, after deduction of expenses of organization, will be allotted to the three first cars in the proportion of 50, 30 and 20 per cent. respectively.

#### CHATEAU-THIERRY AND GAILLON TESTS.

The quiet little Norman town of Gaillon will not be deprived of its famous hill race, for permission has already been demanded and obtained for this classic event to be run on October 15. In addition, competitions for 'buses, commercial vehicles, and runabouts are under consideration. The Chateau-Thierry hill race, to be held a fortnight earlier, on October 1, is also assured. Alterations in the curves on the road, which will allow of higher speeds, are to be commenced immediately, and it is intended to paint a white line on the road indicating the best course for the driver to follow.

#### ROAD TRIAL WITH KEROSENE FUEL.

Unfortunately, the competition organized this week for automobiles employing paraffin (kerosene) as fuel, failed to receive the number of entries which its importance deserved. The course was from Paris to Rouen, a distance of eighty miles, over a rather hilly road, rendered more difficult by much rain and wind. Only four entries were received, namely: (1) Carbureter Claudel, 16-horsepower Delahaye motor; (2) Carbureter Gautreau; (3) Carbureter Constantini & Charlon; (4) Carbureter Claudel, 12-horsepower, Brillié heavy wagons. But three of these came to the starting point, the car bearing the Gautreau carbureter being unable to start, owing to an accident to its differential.

The 16-horsepower Delahaye, weight 1,535 kilos (3,377 pounds), Carbureter Claudel made the best performance, covering the entire distance at an average speed of nineteen miles an hour, with a consumption of 24 liters 848 (6.56 gallons) of kerosene, being 0 liter 127 per ton kilometer. Constantini covered but 44 miles with kerosene as fuel; owing to the carbureter not being properly adjusted, the rest of the distance had to be finished with gasoline. The Brillié wagon, a vehicle weighing, with its load, four tons, and having a two-cylinder 12-horsepower motor, spent nearly twenty-four hours on the road, owing to different repairs to its motor.

On the whole, it was not a very brilliant performance, but heavy oils as a substitute for gasoline have received very little attention in France, and this first public exhibition will probably be the forerunner of further study in the same direction.

#### START OF LONG WHEEL TEST.

Another useful competition which has lost some of its interest on account of the few entries is the wheel test. Twelve vehicles had been expected, but only four started off on the Paris Bordeaux, Gênes, Paris tour,



a total distance of 2,500 miles. The small number of entries is partly accounted for by the difficulty of obtaining cars for the journey, and owing to the strike of body makers having prevented some of the wheels being finished in time. The cars are: 24-horsepower Dietrich, weighing 1,970 kilos, fitted with American Samson leather band and carrying five extra inner tubes for rear wheels and three for front wheels; 12-horsepower Corre, weighing 1,560 kilos, fitted with Vulcan tires, and carrying three spare rear inner tubes and two for front wheels; 16-horsepower Regina with limousine body, weighing 1,800 kilos, having Samson leather bands on tires, and carrying two spare inner tubes, the wheels being equal in size; 16-24 Rochet-Schneider, weight 1,440 kilos, with Samson (Paris) leather tires and having one spare front and one rear inner tube.

Every part of the wheels and all the spare tires were specially marked before starting; the conductors were under an engagement to carry no other tires than those marked, and to present all the tires at the end of the run. In addition, each car was loaded with 200 kilos of lead, in order that special light bodies might not take part. A complete control was organized by the automobile clubs of the districts passed through, and there was every guarantee of an honest test. At the start the roads were in a greasy condition, and a strong wind made speeds utterly impossible. Between Paris and Bordeaux some of the cars were almost stopped by the wind, the limousine suffering especially. As the south of France was reached, the road and atmosphere conditions improved and good speeds were obtained on the roads sheltered by pine trees. At the time of writing, Toulouse had been left behind and Nîmes reached, the Dietrich car with American Samson tires being first, and all running well.

#### MILITARY WAGONS COMPETITION.

Last November the French military authorities organized a competition for automobile military wagons, which, however, had to be abandoned, as only three vehicles came up for inspection. The regulations had been drawn up without the advice of the automobile constructors, and were so little

to their liking that but few decided to participate. The new program of a competition for military transport wagons to be held next August has just been published by the war authorities, after having been approved by the Syndicated Chamber of Automobile Constructors.

The three first wagons in the competition will be bought by the state, and the following four will be awarded money prizes. The tests consist of five successive days' running over different roads in the neighborhood of Paris, the daily distance being forty-seven miles. Two separate days will be devoted to receiving and inspecting the vehicles. All classes of either steam or gasoline motors are eligible, the total weight of vehicles fully charged not exceeding 3,000 kilos, and the whole being of French construction. The transport wagons adopted as the result of this competition will be the first to be used in the French army.

The Parisian General Omnibus Company has decided to open a competition among Paris builders for a type of bus to replace the present horse-drawn vehicles. It is almost incredible that a city possessing such a magnificent display of private automobiles as does the French capital should not have within its boundaries a single power omnibus. The sooner the existing "crawlers" disappear the better for all concerned.

#### AUTO BOAT BUILDERS BUSY.

All the automobile boat builders on the Seine below Paris are exceeding busy with craft for the coming season. The last two years, with the introduction of the gasoline motor to boats, has quite revolutionized the trade and transformed a little-known industry into one of the greatest importance. During the past few days quite a fleet of boats intended for the Monaco meeting have been put into the water and undergone their trial spins. Among them are the Delahaye Trident, a 15-meter racer of 300 horsepower; the Palaisoto, built by Tellier & Girard, and fitted with six-cylinder Panhard engines; the Palaisoto II, carrying 80-horsepower Renault engines; the Dubonnet, with 300-horsepower Delahaye motor; the Billancourt, with 80-horsepower Renault engine. The Mercedes-Mercedes, the first automobile

yacht constructed, was also launched from the Pitre yard. The yacht belongs to Herr Jellineck Mercedes, is 18 meters, 50 on the water line, has two Mercedes motors of four cylinders, and is most handsomely fitted.

#### CUSTOMS REGULATIONS MODIFIED.

As the result of the action of the Chambre Syndicate de l'Automobile, an improvement has been made in the customs regulations which will be appreciated by automobilists traveling on the continent. Up to the present every time a car came onto French soil duties had to be paid, and the money was refunded on leaving. For those who were touring, nearing the frontiers and frequently crossing over, the delays caused much annoyance. Now the regulations have been so modified that a car, after having first complied with the regulations, can enter and leave the country any number of times without being detained by the customs, finally withdrawing the "caution" deposited on permanently leaving the country.

In deciding to undertake the defence, free of all costs, of all its members prosecuted by the police for alleged excess of speed, etc., the Association General Automobile has taken a wise step. The system known as "contravention au vol,"—the taking of the number of a car as it runs past, and then prosecuting the owner—has been made possible only because automobilists preferred to pay a fine rather than submit to the trouble of attending court. It is obviously impossible for a policeman to always catch the right number of a car, even at a moderate speed, and experience has proved that many of them are little concerned as to what the number is, so long as it consists of figures. The protection of the association extends over the whole of the Seine department and a good deal of the Seine and Oise district, and covers the part of France in which automobilists are the most numerous and the most freely prosecuted.

#### AUTOMOBILE CLUB'S ART SALON.

Once a year the A. C. of France organizes an exhibition of works of art executed by the club members. Georges Rives, the director of the great Paris automobile salon, takes the matter in hand, and for a few weeks works as if the future of the whole



POSTAL CARD MAILED AT BLUFF, NEW ZEALAND, BY CHARLES J. GLIDDEN, ON HIS GLOBE-GIRDLING AUTOMOBILE TOUR.



industry depended on his efforts. This year's function was quite equal to the high reputation of the club, and the works exposed were many of them of great artistic merit. Among the pictures a large portrait in oils of Richard Brasier, by M. Zwiller, represents the conqueror of the Gordon Bennett cup standing by the side of a table bearing an allegorical figure representing victory, and attracts much attention by reason of the faithfulness of the artist's work. In one corner of the section devoted to gold and silver works are exposed the medallions executed by M. Amoc for James Gordon Bennett and presented to the builders and chauffeurs who have already won the coveted cup.

Yesterday's closing ceremony was particularly brilliant. A reception, a dinner, speeches, a theatrical and musical performance, and a ball constituted the program of the evening.

June 11, 1905, will be the anniversary of the first Paris-Bordeaux and return race, and steps will be taken to suitably commemorate the event.

### Moline Light Touring Car.

The light touring car illustrated by the accompanying engraving is one of the many new additions to the large class of American touring cars of moderate weight and price, and yet capable of carrying four or even five passengers safely and comfortably over American roads. It is built by the Moline Automobile Company, of East Moline, Ill., and is the lighter of two touring models, the large car having a motor of 24 horsepower. Two runabouts are also built.

The motor of the light touring car is rated at 18 horsepower, and is of the conventional four-cylinder vertical type, placed at the front of the car. The cylinders are cast in pairs with integral heads, water-jackets and valve chambers, all the valves being placed on the same side—the left. The bore is four inches and the stroke four and a half inches. All the valves, which are of the same size and interchangeable, are mechanically operated.

Current practice is followed in making the crank-case of aluminum and bolting it to the frames through lugs cast on the case. Covers removably fitted over large hand holes give easy access to the interior of the case for inspection or adjustment of the big end bearings. Three bearings support the crankshaft, the middle one being between the pairs of cylinders. All the bearings are fixed to the upper half of the case, permitting the removal of the lower half without difficulty; in fact, the motor may be run with the lower half of the case removed. The bottom of the case is partitioned so that the lubricating oil will not all run to one end when the car is on a grade, causing excessive oiling in some cylinders and "starvation" in others. The pistons are five inches long, being half an inch longer than their stroke, and are fitted

with three split rings; the centers of the pistons are reduced—a practice which seems to be increasing in favor among manufacturers of explosion motors. Crankshaft, pistons, piston rings and wrist-pins are all accurately finished by a grinding process. A special nickel babbitt composition is used for the main crankshaft bearings, which are 1 1-2 inches in diameter, 3 inches long at the ends of the crankcase and 2 3-8 inches long in the center. Crankpin bearings are of phosphor bronze, and are of the same diameter as the main bearings and 1 3-4 inches long. Phosphor bronze is also used in the wrist-pin bushings, which are 7-8 inch bore and 2 inches long.

Planetary transmission gearing gives two forward speeds and a reverse, and has no internal gears, no fiber gears and no undersized pinions, no gear having less than sixteen teeth; all are cut with special Browne & Sharp cutters. When the high speed is engaged the entire transmission revolves as one piece, no gears being in use. The shaft which carries the transmission is flanged, as is also the rear end of

tube. The wood artillery wheels, 32 inches in diameter, are fitted with 3 1-2 inch double tube tires, and run on roller bearings.

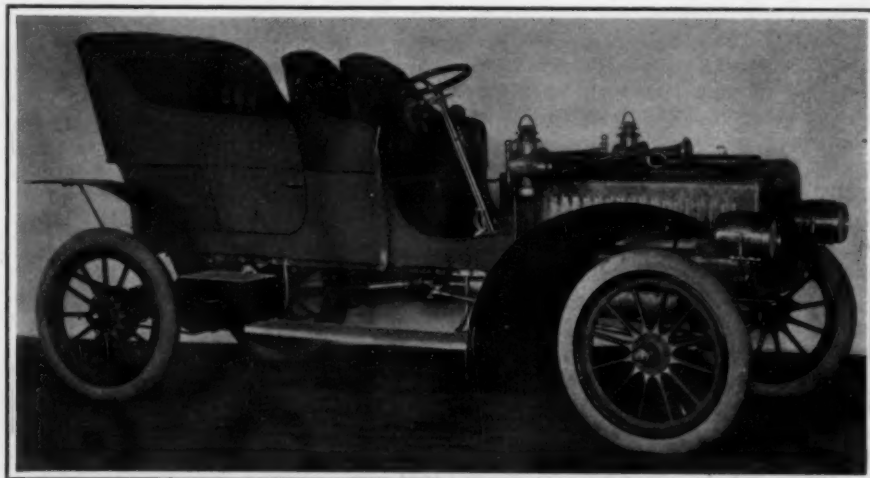
The engraving shows clearly the appearance of the machine with its side-entrance body, well designed hood and individual front seats. The body is hung on 44-inch full elliptic springs at the rear end and 46-inch cross spring in front, the manufacturers believing that this three-point suspension removes from the frame much of the strain caused by the usual four-spring arrangement. The wheelbase is 105 inches.

Brewster green is used for the body finish, while the running gear is cream colored. In running order the car weighs 1,700 pounds.

### QUAKER CITY-TO-SEA 'BUS LINE.

*Special Correspondence.*

PHILADELPHIA, March 27.—With the prospect of the early completion of the "meadow road," connecting Atlantic City with the mainland at Pleasantville, comes a report that a company of Philadelphia capitalists proposes to establish a line of automobiles



MOLINE SIDE ENTRANCE LIGHT TOURING CAR WITH 18 H.P. FOUR-CYLINDER MOTOR

the crankshaft; and these flanges are bolted together with the flywheel between them. A bearing carries the other end of the transmission shaft, being supported on one of the cross members of the steel frame and enclosed in an aluminum housing. This housing serves also as a support for the forward end of a tubular casing for the propeller shaft. The casing extends from the rear end of the transmission shaft to the live rear axle. At the junction of the two shafts, and protected by the housing, is the universal joint. Steel tubing 2 3-4 inches in diameter forms the rear axle sleeve, the steel live shaft being 1 3-8 inches in diameter and running in Hyatt roller bearings. Similar bearings are fitted at each end of the driving shaft. A Brown-Lipe differential gear is used.

Steel tubing is used for the front axle, which is 2 inches in diameter and dropped in the center. Elliott steering knuckles are pinned and brazed into the ends of the

between this city and the sea. Mayor Story, of Atlantic City, says he has been approached regarding the municipal regulations governing a terminal at his end of the line. It is also stated that the Bellevue-Stratford will be the Philadelphia terminus. As a starter it is proposed to put two vehicles on the line, one to start from either terminus at the same time. If the business proves profitable, the "rolling stock" will be added to, and more frequent trips made.

The five-mile stretch of meadow road, which has hitherto been the bane of automobilists, except in the most perfect weather, is expected to be completed within sixty days. It has already cost Atlantic City and county more than \$100,000. It will be 60 feet in width, with a topping of firm gravel—and toll-less.

An ordinance is now pending before the city council of Augusta, Ga., restricting the speed of motor vehicles within the city limits to five miles an hour.

## Napier Gordon Bennett Car.

*Special Correspondence.*

LONDON, March 18.—Now that it has been finally decided that the Gordon Bennett race shall be run separately as in the last two years, great efforts are being made by the industry interested to finish the racers they have in hand in order to have them well tuned up and in perfect running order for the eliminating trials.

S. F. Edge is once more first in the field, having just recently delivered to John Hargreaves the Napier car he has entered for the British trials over the picturesque Isle of Man course on May 30.

The new car is equipped with an 80-horsepower motor or four cylinders, having a water jacket of aluminum cast in one piece; the cast-iron liners forming the cylinders being pressed into the jacket by hydraulic pressure. The inlet valves are immediately over the exhaust valves, and are mechanically operated with the sparking plugs just between the inlet and exhaust valves.

The cooling water is circulated by means of a large diameter pump driven direct from the motor and circulating through a honeycomb radiator of large area. A simple fan fitted behind the radiator aids the cooling.

Napier high-tension synchronized ignition is used, with all parts in view and easily accessible on the dashboard.

The steering affords a very comfortable position for the driver, with the lever actuating the throttle on top of the steering wheel. The gear-box is made of aluminum containing gears giving three speeds forward and one reverse; the high gear driving direct like a propeller shaft straight onto the rear axle. The frame is of pressed nickel steel with springs outside the frame. Special attention has been paid to the method of suspension. The wheelbase is 106 1-2 inches and the tread 55 1-2 inches. The gasoline



CHASSIS OF 40-H. P. 1905 MERCEDES, SHOWING OPERATING MECHANISM.

tank can carry sufficient fuel for a run of 200 miles without a stop. The lubrication is by means of a drip feed to the various bearings and pump to the crank chamber. There is also an auxiliary oil tank fitted, and by means of a small semi-rotary pump the main lubricators can be replenished without stopping the car.

The tires fitted are corrugated, non-slipping. Dunlops.

### Mercedes 1905 Chassis.

The lay out of connections in a 1905 Mercedes car between the side levers and pedals and the operating mechanism in the space from the dash to the cross counter-shaft, is shown very clearly in the accompanying photograph of a 40-horsepower chassis recently imported by Smith & Mab-

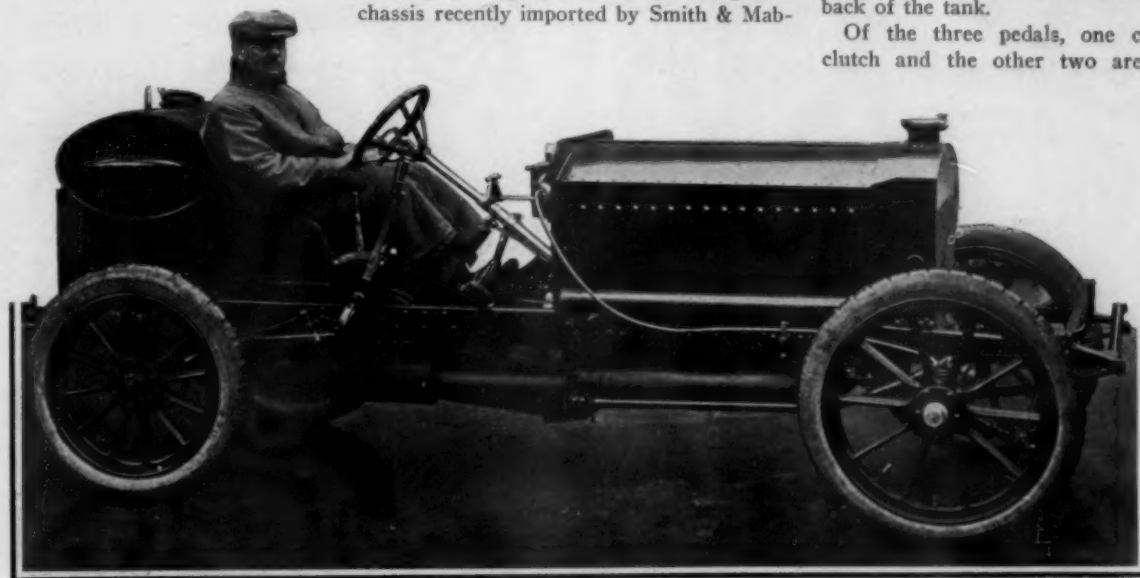
ley of New York. The "clean" appearance of the chassis in its freedom from a complicated tangle of rods, levers, and joints is quite striking, and shows that a great deal of study is embodied in the design. In the Mercedes car the change-speed gear is operated on the selective system, the inside lever with push down lock in the grip work-

ing in an H slot. The horizontal shaft to which the lever is keyed is hollow and slides on the cross shaft connected with the emergency brake lever on the outside.

In the 1905 Mercedes car the gear box is carried further back than in the older models, owing to the increased length of frame, so that the side chains are not too long. In the picture the gear shifting rods can be seen parallel with the main shaft and running from the gear box to the box on the cross shaft of the gear-changing lever. In this box is housed the finger which engages the gear-changing rods.

In the new Mercedes the filling pipe of the rear gasoline tank is carried forward with the cap end at the footboard, so that it can be reached from the side instead of the old way of filling through a pipe in the back of the tank.

Of the three pedals, one controls the clutch and the other two are separately



FOUR-CYLINDER 80-H. P. NAPIER RACER, ENTERED IN THE GORDON BENNETT RACE BY S. F. EDGE.



connected to the band brakes on the second motion shaft and the countershaft. These brakes are automatically water cooled, the water being carried in a small side tank beside the step, taking pressure from the exhaust. When the brake pedal is depressed a connection opens a small valve in the water pipe, and allows the water to trickle inside the brake drum.

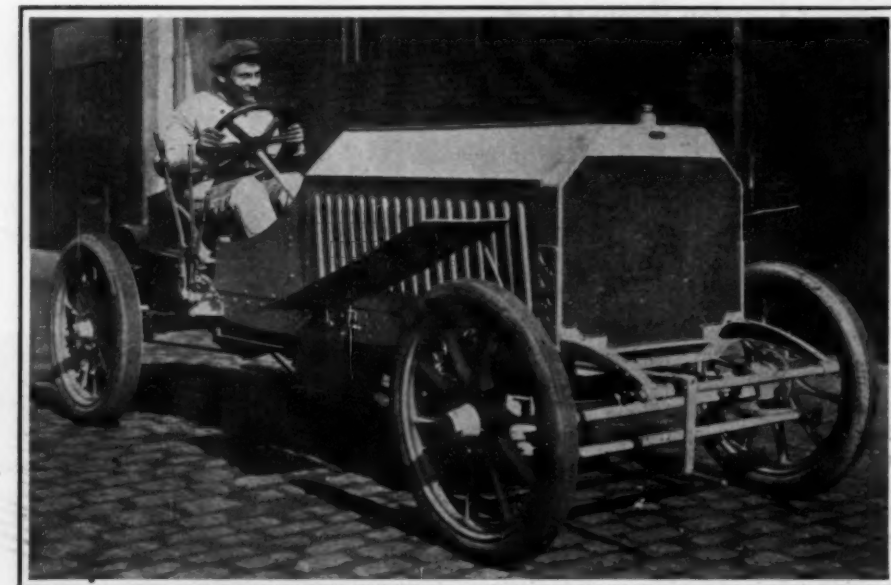
All the mechanism is enclosed in a sheet metal pan seen below the frame. On this year's car a sight feed oiler of the plunger type is placed on the upper right-hand corner of the dash and a pipe leads down to the clutch collar which can thus be kept lubricated from the seat with little trouble.

Many of the parts look small for the work they have to do, and they would be were ordinary materials of construction used. The kind of material used, however, is the very best that metallurgical science can produce, and, of course, the cost is correspondingly high.

#### CONVERSION OF A MAYOR.

Mayor Henry M. Doremus, of Newark, N. J., is now an automobilist, having joined the ranks very lately, and Essex County motorists are pleased at this influential addition to their forces. Local automobile dealers hold themselves responsible for the conversion of the mayor from a horseman to an automobilist, an end toward which they worked unceasingly for nearly two years.

When opposition to automobiles was more pronounced than it is now, one of the most pushing automobile dealers in the city conceived the idea of interesting the mayor in automobiles, and in this way forestalling any unreasonably strict local legislation that might be attempted against self-propelled vehicles. This was before the Scovel auto-



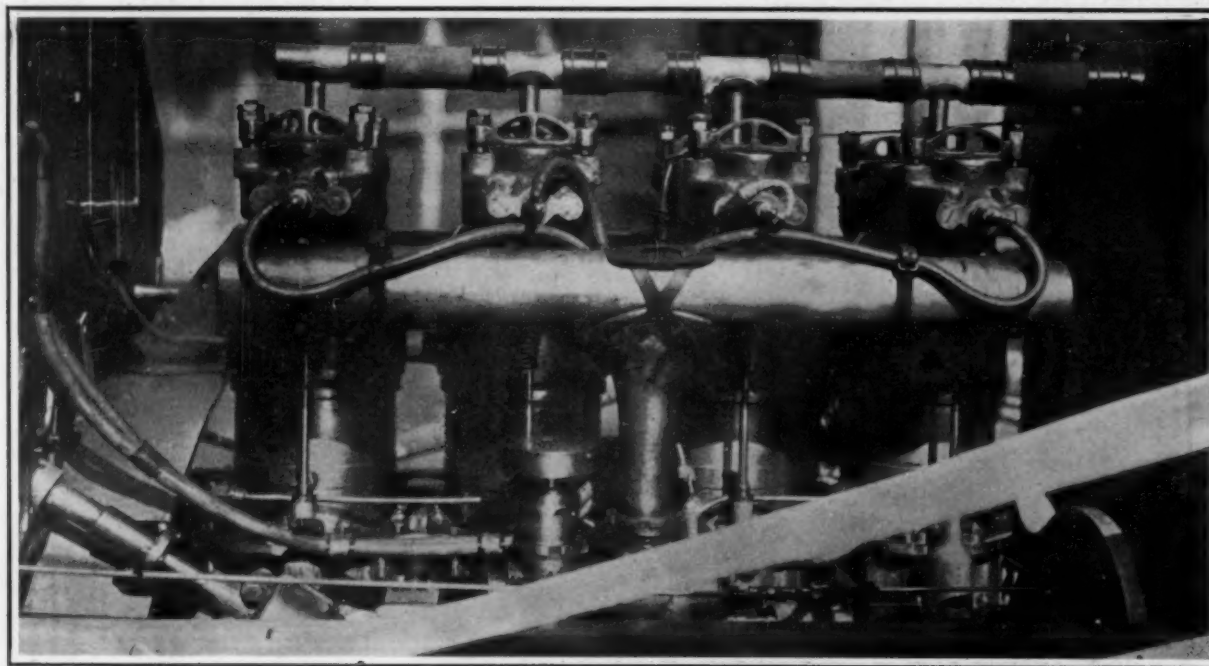
NEW PANHARD 150-H. P. RACING CAR JUST COMPLETED FOR GORDON BENNETT RACE.

mobile law was passed by the legislature. It was hard work interesting him in automobiles, for Mayor Doremus was a horse lover from boyhood up, but one day he accepted an invitation from this dealer to take an automobile ride. Everything went along smoothly, and upon his return the mayor expressed himself as well pleased with his novel experience. That was the beginning, but the astute dealer did not let his guest forget the ride, and very soon afterward secured him as one of a party that filled two machines in which a long trip was made to one of the city's public works. In the party were two police commissioners and other friends of the mayor.

The road was rough and hilly and gave

the members of the party an illustration of what an automobile was capable of doing. On the way back Mayor Doremus was induced to take charge of the car, and after a few directions was able to run it alone.

Upon the return from the trip it was plain to all that the mayor was getting interested in motor cars, and the advantage was followed up. More rides followed, and other dealers showered him with invitations for demonstrations. Then they began to broach the subject of purchasing a machine. The mayor was a willing listener and last December decided to buy a Thomas Flyer. The car has been equipped with all the conveniences, and is one of the handsomest cars in the city.



ENGINE OF NEW 150-H. P. PANHARD, FROM INLET SIDE, SHOWING FOUR SEPARATE FORGED STEEL CYLINDERS



## New Rambler Surrey.

Rambler surrey, Type Two, is a roomy and comfortable touring car with side-entrance body; built for comfort rather than speed, the gearing calculated to transmit ample engine power for hill climbing and traversing bad roads rather than for record-breaking runs. The car is intended for a family vehicle, for use all the year around.

A double opposed cylinder motor is hung midway between the front and rear axes with its cylinders pointing fore-and-aft, the crank-shaft extending across the frame and carrying the two-speed and reverse planetary transmission gear. An outside bearing attached to the frame carries the

pension loosened, the entire motor can be rotated, allowing the transmission to drop, when it may be removed from the crank-shaft, and the crank-shaft itself taken out without further taking down the motor.

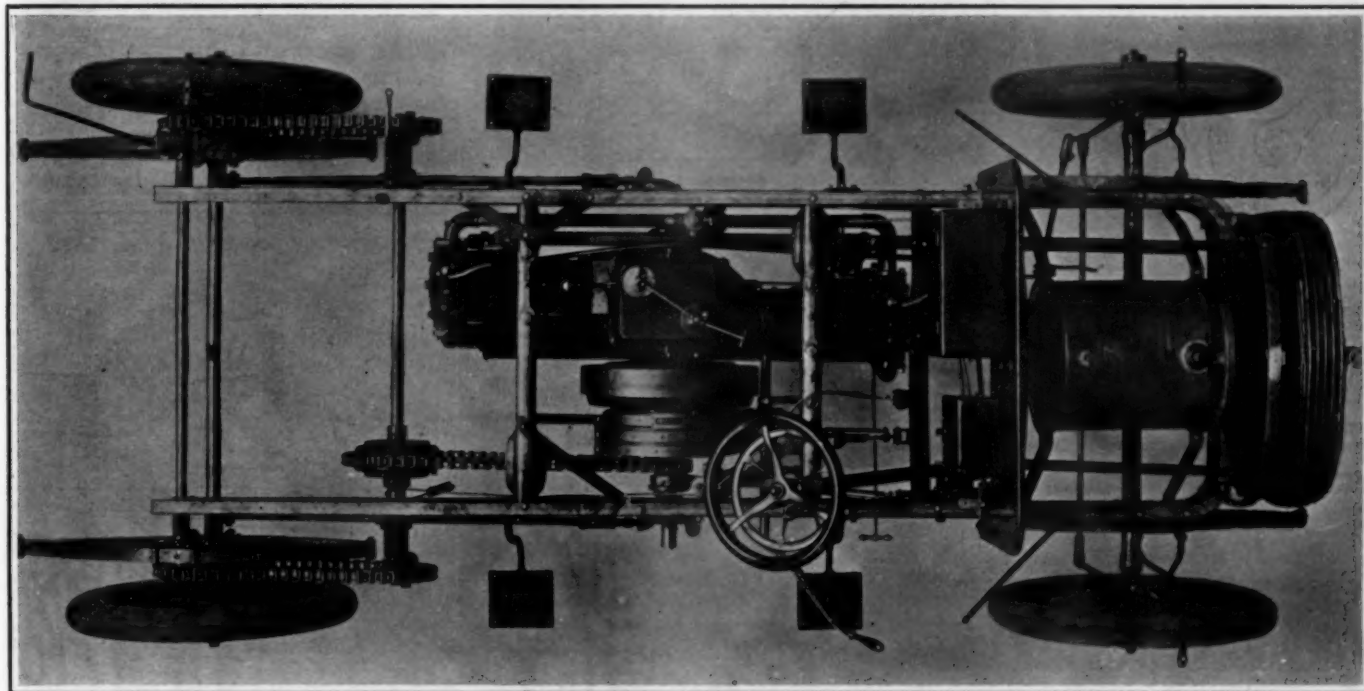
The cylinders are made with extreme care in order to insure as good a compression as possible. They are first bored in a horizontal boring machine, and then reamed to remove the tool marks. The piston is ground to a fit and then worked into the cylinder with oil and rouge. Each piston is fitted with six rings, four in pairs in the usual grooves near the top of the piston, and the other two near the open end; the rings are ground to a fit on the faces and sides.

A governor automatically controls the

ried in a cylindrical tank under the bonnet, is sufficient to carry the car about 150 miles.

The frame and cross members are of pressed steel, the cross members being of a deep U-section with the opening downward. All the springs are full elliptical, and those in the rear are connected together on top by a steel rod passing through slots in the frame. These slots allow of sufficient adjustment to keep the springs horizontal when the driving chains are adjusted by means of the radius rods. The road wheels, of the artillery type, all run on ball bearings; they are thirty-two inches in diameter and are shod with four-inch tires.

A quadruple-thread screw and nut steering gear is fitted, the entire gear being re-



CHASSIS OF NEW RAMBLER SURREY TYPE TWO, FITTED WITH 20-H. P. DOUBLE OPPOSED CYLINDER MOTOR.

extended shaft and relieves the main bearing of the extra strain imposed by the weight of the transmission and the pull of the driving chain. Power is transmitted by a single chain to a countershaft, near one end of which the differential gear is placed; short side chains drive to sprockets on the rear wheels.

The motor has cylinders of 5 inches bore and 6 inches stroke, and is rated at 20-horsepower. It is hung from two heavy cross members of the frame, iron rods passing around the cylinders and through the cross-frames, and being held by nuts locked by steel spanners placed over the nuts and secured to the frame by screws. This nut-locking arrangement shows clearly in the photograph. Iron blocks are fitted between the cross frames and the cylinders; and the motor is further steadied by brace rods fastened to the frame. When these rods are removed and the nuts of the engine sus-

timing of the ignition, causing it to follow the speed of the engine at all times; this insures the spark being retarded when starting the motor, eliminating the dangerous "kicks" that are sometimes caused by trying to crank the motor with the spark advanced. There is no hand lever for controlling ignition timing. A single float feed carbureter supplies gas to both cylinders; it is automatic in action up to certain speeds, above which the air supply is regulated by a handle on the steering column. The extra air admitted when this lever is used has the effect of reducing the suction on the spray nozzle. Cooling of the motor cylinders is effected by the thermo-syphon system, which is used on all Rambler cars. The radiator has a cooling surface of nearly seventy-five square feet and holds seven gallons of water, sufficient for about 100 miles of running under average conditions. Twelve and a half gallons of gasoline, car-

movable *en masse* from the car when disconnected from the knuckles, and two bolts are taken out. Adjustments are provided so that the height of the steering wheel and its distance from the operator may be varied considerably.

This chassis is used in making up the Rambler limousine, as well as the surrey Type Two. The wheel-base is 100 inches, and the motor is geared down sufficiently to enable the car to surmount any ordinary hill on the high gear.

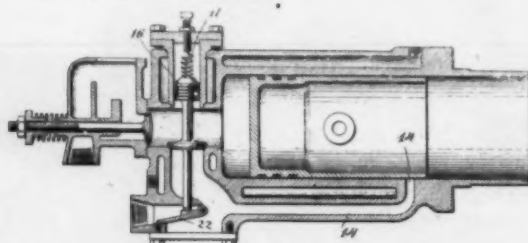
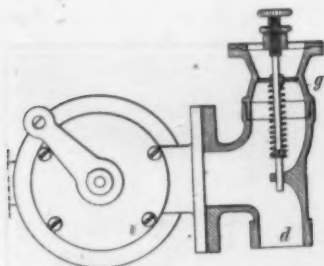
The man who becomes for the first time the owner of an automobile is frequently led to believe that his car runs more and more slowly as he uses it; when as a matter of fact the car is running as fast as ever, if not faster. The trouble is with the owner, who has grown accustomed to the speed and imagines it to be less than it really is.

# Patents

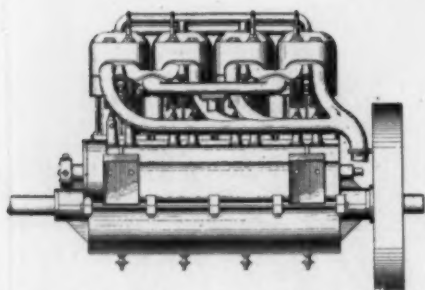
## Hill-Climbing Gear.

No. 784,607.—R. H. White, of Cleveland, Ohio.

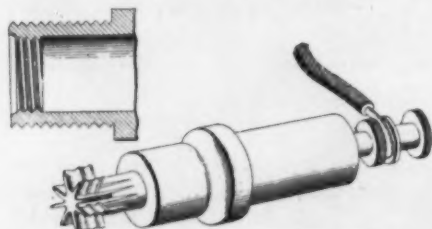
This is the hill-climbing gear used in the current model of the White steam car. The bevel driving pinion *g* turns freely on the driving shaft *M*, and is integral with a spur gear *G*, which has internal gear teeth cut in it. A pinion *q* slides on a squared portion of *M*, and enters the internal gear in *G* to give the direct drive. For the low gear the transmission is from *q*, through the two gears on sleeve *R*, to *G*. Both *q* and *R* are



LONGUEMARE CARBURETER.



RUTENBER INTAKE AND EXHAUST HEADER.



HINDMAN-ALBRIGHT SPARK PLUG.

shifted by the arms *T*, which are attached to rock shaft *t* and move in opposite directions. Thus in the direct drive *R* does not turn, and there is also a neutral position in which the engine can be run to operate the pumps without imparting motion to the axle.

## Carbureter.

No. 785,622.—A. A. F., and G. Longuemare, of Paris, France.

The main air supply entering at *d*, in the partly sectional plan shown, is reinforced at high motor speeds by a stream from the auxiliary inlet governed by the valve *g*, shown in the drawing.

## Cooler and Muffler.

No. 784,191.—F. L. Sturtevant, of Quincy, and T. J. Sturtevant, of Wellesley, Mass.

A device whose use and function is clearly shown in the drawing. The exhaust gases enter at the left and are delivered to the outer set of pipes *14*, from which they pass at the other end of the muffler to pipes *15*, and finally to the central expansion chamber *19*, escaping at *20*.

## Mechanical Lubricator.

No. 781,584.—J. J. Aull, of Cincinnati, O.

The Lunkenheimer lubricator described in these pages last January 14. Its principle is that of individual pumps to which the oil passes through needle valves and sight

central stem will carry it away, resulting in premature ignitions, the device should be successful.

## Intake and Exhaust Header.

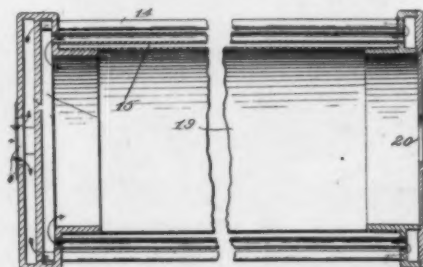
No. 785,684.—E. A. Rutenber, of Logansport, Ind.

A cast header for a two- or four-cylinder engine, comprising both intake and exhaust passages in one piece, as the drawing shows.

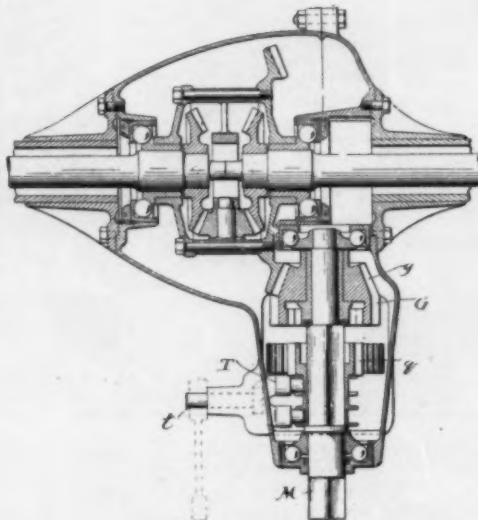
## Shock Absorber for Gears.

No. 784,352.—S. W. Rushmore, of Plainfield, N. J.

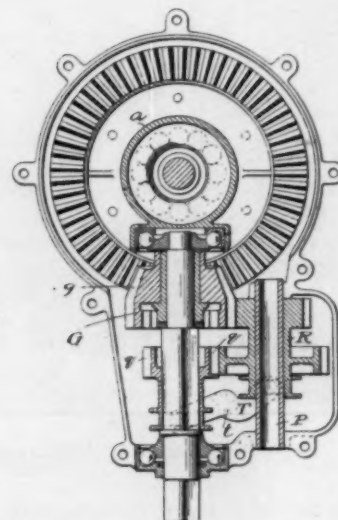
The device shown in issue of Dec. 17, 1904, page 668. It consists essentially of a sliding gear mechanism in which each of the



STURTEVANT COOLER AND MUFFLER.



WHITE BEVEL DRIVE HILL-CLIMBING GEAR.



gauges, the oil being choked to reduce the feed, so that the pumps work in a partial vacuum.

## Spark Plug.

No. 784,677.—J. E. Hindman and J. J. Albright, of Columbus, Ga.

A spark plug in which the porcelain and central or positive electrode have the appearance shown in the drawing. The spark or sparks jump from the star-shaped end of the electrode to the edges formed by the screw threads in the shell, a portion of which is shown separately in the drawing. The object is to provide the easiest possible air gap for the spark, and unless it is found that the large surface of the spark points permits them to gather heat faster than the

fixed gears is connected by a slipping friction clutch, with a narrow companion gear, which takes the shock of meshing. Thus the gear clutch, which is backed by a spring, slips till the gear shaft has acquired the proper velocity, when the sliding gear is shifted into mesh with the fixed gear.

**Bolt-holes** that are badly worn should be either bushed or enlarged and fitted with correspondingly large bolts. The wear of the second season cannot be judged by the wear of the first, because the rapidity of the wear increases with the size of the hole, so it is not safe to assume that because a hole has worn a thirty-second of an inch in one season it will wear only a thirty-second more in the next.



## Races at Morris Park.

Automobile racing in the metropolitan district will be given additional impetus this season by the opening of the great Morris Park trotting track to the sport. This is one of the largest and most popular race courses in the vicinity of New York City, having a grandstand and clubhouse much larger than those at Empire City track or the Brighton Beach course. The big oval course, with its long, wide stretches, makes possible the running of mile dashes with only one turn, while half-mile and kilometer dashes can be run on the straights and shoots. The turns are to be banked higher than at present, and the entire surface oiled to make the course dustless.

One of the owners of Morris Park is Dave Hennen Morris, president of the Automobile Club of America, who, observing the growing interest in automobile racing, had inserted in the lease of the park to the Westchester Racing Association a clause permitting the use of the course for that purpose. To conduct automobile meets a new association has been organized under the name of the Morris Park Motor Club. Mr. Morris is president; J. Horace Harding and J. S.

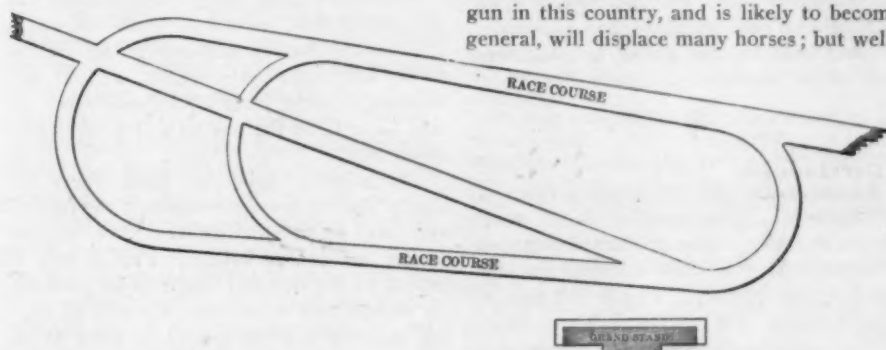


DIAGRAM SHOWING GROUND PLAN OF MORRIS PARK RACE COURSE.

Bunting, both members of the Automobile Club of America, are respectively vice-president and treasurer, and Alfred Reeves, well-known as the manager of the many successful race meets at the Empire City track during the last two seasons, is secretary.

It is planned to hold the first races of the season at Morris Park on Saturday, May 20.

The old-time prediction that the railways would seal the fate of the horse was changed so that automobiles were to displace that animal when the motors began to be used in this country, writes U. S. Consul Frank W. Mahin, from Nottingham, England. Horses, however, are now dearer than before the coming of the automobile, especially carriage horses, the kind that one would expect to be most affected. The fact seems to be that automobiles have created a new school of travel. Many people who use them did not keep horses, and people using them who did keep horses—wealthy country families, for instance—still retain their horses for emergencies. In



CROWD AT MORRIS PARK TRACK WATCHING METROPOLITAN HORSE RACES.

point of fact, it is believed that the automobiles will affect only the railways in their receipts from passenger fares. The use of motor omnibuses, vans, etc., which has begun in this country, and is likely to become general, will displace many horses; but well-

creasing number in use in other lines of business.

## "Model" Touring Car.

A side-entrance touring car has been brought out by the Model Gas Engine Co., of Auburn, Ind., and is illustrated herewith. Motive power is supplied by a double-opposed cylinder horizontal motor hung under the body; it is rated at 16 horsepower at 1,000 revolutions. Drive is through a sliding-gear transmission, giving three speeds and reverse controlled by a single lever to the live rear axle, a single chain being used. When the high gear is "in" the drive is direct, there being no gears in mesh. The chassis of this car is also offered fitted with a delivery body, and is capable of carrying loads up to 2,000 pounds. Details of the Model mechanism were given in THE AUTOMOBILE of October 22, 1904.



"MODEL" SIDE ENTRANCE TOURING CAR WITH 16-H.P. DOUBLE OPPOSED MOTOR.



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## Society of Automobile Engineers in America.

Among the many automobile organizations in this country there is none that has a wider field of usefulness or a better opportunity to promote the best interests of the designer, builder and user than the Society of Automobile Engineers. It has been organized on the lines of the great technical societies, such as exist in the special fields of mechanical, electrical, and marine engineering in America. The officers represent leadership in this newest branch of the broad field of engineering. Their names and purposes are set forth in an announcement about the society in our news pages.

For a long time there has been a pressing need for the existence of a purely technical society to bring together in a compact body the automobile engineers of America. And it is a matter of congratulation that this need has been recognized by men who have the respect and confidence of the entire industry. To get the full benefit of organized technical investigation it is above all other things essential that those to whom leadership is entrusted shall be single minded in their purpose and shall not allow any personal or commercial considerations to stand in the way of technical perfection. This we believe has been kept in mind by the organizers of the society; for the board of officers consists of men who are not only eminent in their profession, but who represent widely different interests, technical and commercial. Upon

these gentlemen now rests the responsibility of mapping out a program that will be free from any taint of partisanship, and that will not allow the divergence, by so much as a hair's breadth, from the true technical consideration of the problems that confront them. In this way only can the society hope to take its stand on the same level with the other representative engineering bodies of this country.

The newness of the field makes the work of the society especially difficult. Precedents have to be established, and there is not that corps of trained men available for membership that exists in the older and larger branches of engineering. To make a showing in the transactions there will be a strong temptation to lower the standard and permit the insidious advertising of wares rather than the professional treatment of topics. This can be safeguarded by a conservative attitude that will seek to do a little and do it well rather than attempt any elaborate program.

There is a sufficiently large number of persons interested to give a good start and a magnificent opportunity to solidify the experiences of American practice. The industry will be immediately benefited by the interchange of views and the concentration of thought on vital questions, and, indirectly, the user will be the gainer by whatever tends to the betterment of car construction.



## A Development in Commercial Vehicles.

At present the demand for the pleasure types of automobiles is so great that the attention of the builders throughout the country is practically centered on this branch of the industry. This is not true in every instance, but of the industry as a whole it may be said that the commercial vehicle in its multitudinous forms is receiving no considerable attention. Several builders have put out vehicles for light and moderately heavy loads, in which the power plants are practically duplicates of the forms used in pleasure cars, with the modifications of body suited to the business uses of the vehicles. But aside from the now familiar electric trucks there have been, of late, only isolated attempts to work along entirely independent or original lines in the production of heavy vehicles for commercial purposes.

No doubt the automobile builder feels warranted in proceeding along the lines of least resistance to meet present demands. It is doubtful, however, if this is altogether the best policy when the future of the industry is considered. In fact it requires no straining of the imagination to foresee that if the problems are not solved by out-and-out automobile builders the purchasing public may look further afield when the inevitable day of mechanical traction arrives.

A fertile field of investigation, which has been practically ignored by the industry here, is the self-propelled passenger coach on steam railroads and interurban traffic. In this issue we illustrate and briefly de-

scribe a coach that we believe is the first (fitted with internal combustion motor) to be put in service by any of the great American railroad systems. Abroad the economies gained by the use of this type of coach in use on feeder lines, and on main lines at times when the regular traffic is light, has been recognized for some time. Indeed, latest advices from England report the intended operation of steam automobile coaches on a division of the Great Central Railroad, the costs of operation being computed at about one-half of those for regular locomotive-drawn trains.

In the coach described in this issue the motor is from the shops of an automobile builder, from which highly successful boat motors have been put out, but the coach itself and the running gear were furnished by the railroad. One of the largest electrical concerns in the country evidently sees possibilities in the field, for it has now under construction two such cars to be driven by a "mixed" system, and it has sent to Europe for the internal combustion motors to be used. Probably it argues that as the foreign builders have made a special study of the problem they are better qualified to do the work than home builders.

At another large shop, quite outside the automobile field, several self-propelled gasoline motor coaches for use in interurban traffic are under construction, and at yet another, outside, plant an internal combustion locomotive for use in desert service is being built.

This is but a beginning. Such orders are sure to become more numerous in the future, and are legitimately in the field of the skilled automobile builder. Profits in this branch of the industry ought to be good, as the competition is not keen, the cost of selling the output is not nearly so great as in the case of the pleasure automobile, and as the vehicles are built to special order there is no risk of old models to be considered.

Great as some of the successes in this industry in the past have been they are trifling when compared with the possibilities of the future. The day of mechanical traction in small units on road and rail has hardly dawned.



## Trend of New Legislation.

In all the bewildering mass of automobile measures introduced in the state legislatures during the winter just closed and passed, killed or pending, there are a few hopeful signs. The New Hampshire law, recently enacted, embraces a clause providing for the holding of automobile races on the public roads, provided the promoters give sufficient warning in advance to other users of the highways. A bill has just been introduced in the New Jersey legislature to amend the Scovel act, so as to permit responsible promoters to hold authorized races on the road. It is evident, therefore, that the legislators of other states than New York can be brought to see the advantages of allowing such contests as the

Vanderbilt Cup race and the Mount Washington climb to the clouds.

At the hearing some days ago at Hartford on the ten automobile bills then before the Connecticut legislature, the state highway commissioner and a judge advocate general declared in favor of raising the maximum speed limit for automobiles above the present fifteen-mile rate in the country, or even of abolishing it altogether, as unnecessary and absurd, providing instead severe penalties for all persons convicted of driving cars recklessly or so as to endanger life or property. Representative Holmes, author of the automobile bill now before the Michigan legislature, has consented to an increase all around in the speed limits originally fixed in his bill, and elsewhere it has been made evident that the public and the legislators are becoming more familiar with the safe speed of automobiles. Even Massachusetts has reported favorably an amendment to the existing law, which will give to towns the right to raise the speed limit above the fifteen-mile rate, but, unfortunately, the measure has a backwardly cutting edge that allows a reduction of the limit provided by the state.

While Massachusetts has reported unfavorably a measure requiring the carrying of lights at night on all vehicles using the highways except farmers' wagons and commercial vehicles, a "universal lights" bill is pending in Connecticut, the fact of the introduction of two such measures indicating a recognition of the need of such protective signals on the highways of the land as well as on those of the water.

Similarly, there is made evident a growing appreciation of the fruitful source of disaster occasioned by the unauthorized use of an owner's car by his chauffeur, by the introduction of measures in some of our most important automobile states making such practice a misdemeanor.

Many such features of the legislative situation at the present time seem to show that fairmindedness and common sense are to prevail in dealing with the new problems presented by the increasing use of the highways by a means of travel that must inevitably break down conservatism, just as did steamships, locomotives and electric trolley cars in their respective domains.

#### TO EXTEND LITIGATION.

At the last meeting of the board of managers of the Association of Licensed Automobile Manufacturers, a committee was appointed to formulate a plan for handling effectively litigation pertaining to infringement of the patents owned by the members of the organization. The committee named by President Clifton consists of Giles H. Stillwell, of the H. H. Franklin Mfg. Co.; E. H. Cutler, of the Knox Automobile Co., and Marcus I. Brock, of the Autocar Co. A report is to be rendered by the committee at the next board meeting. It appears to be the purpose to map out a line of procedure in instituting suits for infringements of detail patents, such as the Columbia steering device.

## WASHINGTON'S FIFTH ANNUAL SHOW OPENS.

**Favored with Ideal Weather Unprecedented Attendance Marks Opening Night — Armory Building Too Small for Show Purposes — All Washington Enthusiastic — List of Exhibitors.**

*Special Correspondence.*

WASHINGTON, D. C., March 28.—The national capital is again in the midst of an automobile show, the fifth to be given by the local dealers' association, which opened in the Light Infantry Armory last night. As in other cities where shows have been held this year the Washington exhibition was the largest ever held locally.

#### SOCIETY IN ATTENDANCE.

The opening was attended by a thoroughly representative Washington crowd. The society element, attired in evening dress, and evincing familiarity with automobile construction, rubbed elbows with department clerks; diplomats, government officials, senators and representatives found there much of interest. Perhaps not many of them will be buyers this year, but the great majority are certainly becoming inoculated with the automobile germ, and it is only a question of time when they will be in the market for cars.

#### MUCH INTEREST DISPLAYED.

Paid admissions on the opening night were four times as many as on the opening night of last year's show, while complimentary tickets were less in evidence than ever before.

No one expected to do much business on the opening night, yet a number of sales were made, and the dealers who made them were beaming with the "smile that won't come off." The general impression prevails that the show is going to give the business here a decided impetus. Washington is fond of small cars, and it will be some time before a change takes place.

This year's decorations and electrical effects do not measure up to those of last year, but the showing of cars and accessories is much larger and finer.

A noticeable feature of this year's show is the strong showing made by the tire people. Last year just one make of tire was shown, whereas this year five blocks of space are occupied by the Goodrich, Fisk and Goodyear companies, while Diamond, Michelin and Continental tires are also shown.

It is a source of much regret that a larger building could not have been secured for this show, as the Armory is far too small to accommodate the exhibitors, but it is the only building in the city that could be used for the purpose.

The dealers put a large number of demonstration cars in commission on the opening night, and made good use of Washington's new speedway, which is within a stone's throw of the Armory, open to motor vehicles.

#### MANY NEW FIRMS.

A tour of the show brings out the fact that the lines of cars represented by local dealers are being enlarged. The National Automobile Co., which last year handled only the Packard and Oldsmobile, has added the Orient, Buick and Studebaker; the Cook & Stoddard Co., agents for the Winton, White, Cadillac and Baker, recently added the Locomobile, although it could not get a Locomobile here in time for the show.

New firms have recently opened quarters,

and they are all at the show, including E. A. Newman & Co., who have the National; Columbia Automobile Co., Franklin; Haynes Automobile Co., Haynes-Apperson; Stanley M. Boyd, Northern, and the Maryland Automobile Co., of Baltimore, which recently opened a Washington branch for the sale of the Knox. These additions make the local colony of rather large proportions.

Not a single foreign car is shown here this year. Some of the most prominent makers in this country are represented on the floor of the Washington Light Infantry Armory, where the show is being held, and American-made cars will surely have the first call here this year.

The show is being favored with splendid weather, and this will undoubtedly stimulate the attendance. The Eastern horse racing season has just opened here, and many prominent turfmen were in attendance on the opening night.

#### LIST OF EXHIBITORS.

The following is a list of the exhibitors: Cook & Stoddard Co., Winton, White, Baker and Cadillac.

Stanley M. Boyd, Northern.

Maryland Automobile Co., Knox.

Wayne Automobile Co., of Washington, Wayne.

Crawford Manufacturing Co., Crawford.

Twiford Motor Car Co., Twiford.

E. A. Newman & Co., National.

Haynes Automobile Co., Haynes-Apperson.

National Automobile Co., Packard, Orient, Buick, Studebaker and Oldsmobile.

Columbia Automobile Co., Franklin.

Charles E. Miller & Bro., Ford.

Pope Manufacturing Co., Pope lines.

Washington Electric Vehicle Transportation Co., Columbia gasoline and Columbia electric.

Standard Oil Co., Mobiloil.

J. N. Williams, Hartford marine engines.

National Electric Supply Co., sundries.

B. F. Goodrich & Co., Goodrich tires.

J. L. Gibney & Bros., Continental tires.

Electric Storage Battery Co., Exide batteries.

S. F. Bowser & Co., gasoline storage tanks.

Hartford Rubber Works Co., Hartford tires.

Jewell Manufacturing Co., leather re-newer.

Goodyear Tire & Rubber Co., Goodyear tires.

Fisk Rubber Co., Fisk tires.

Diamond and Michelin tires were shown by National Electric Supply Co.

**French automobilists** have such a high regard for the benefits to be derived from the use of kerosene for flushing out the cylinders of gasoline motors that their cars are sometimes fitted with small tanks permanently attached, so that after a run the opening of a cock will send a quantity of kerosene into the cylinders, washing them out and leaving them in good condition for the next start. The same idea may be employed, in a simple manner, on small cars by using a large oil-cup to hold kerosene and piping it to the cylinder or cylinders, placing cocks in the pipes. If the kerosene is made to flow through the regular oil pipes, so much the better, as it will keep them clear. If space is restricted, an ordinary "drip-cock" may be used instead of the oil-cup; in this case it will be necessary to pour the oil from a can or other receptacle having a spout. It is a good idea to give the engine a few turns by hand after injecting the kerosene, so that the oil will work into the places where it is needed.



## NEW YORK-CHICAGO HIGHWAY CONVENTION.

**Interstate Trunk Road Advocates Holding Sessions and Banquet in Elmira to Stir Up Enthusiasm—Proposed Route Familiar to Endurance Run and World's Fair Tourists.**

*Special Correspondence.*

ELMIRA, N. Y., March 27.—The second annual convention of the New York and Chicago Road Association was held here last week, being brought to a close in the afternoon of Wednesday. The sessions were attended by delegates from cities and towns all along the route of the proposed trunk line highway from New York City to Chicago, and the convention was the most successful yet held. The officers of the New York and Chicago Association and the Southern Tier Good Roads Association, under whose joint auspices it was held, are greatly encouraged and believe that the immediate result of the convention will be the construction of many individual links in the system that eventually will form a complete chain of improved roads from the Atlantic Seaboard to the western metropolis.

The proposed object lesson interstate highway, for which the two associations are working, follows the route of the Pittsburgh endurance run course from New York to Kingston, through the Southern tier of counties in New York state by way of Binghamton and Elmira, thence through Hornellsville, Olean, Jamestown and Westfield to Erie, Ashtabula and Cleveland. From Cleveland it follows the well-known route of the St. Louis tour, through Toledo, Bryan, Goshen, South Bend, La Porte and Valparaiso and Hammond, into Chicago.

The last day's sessions of the convention were devoted to addresses by prominent good roads advocates. Norman A. Pierce, of Binghamton, a leading member of the Binghamton Automobile Club, told of the efforts of his organization to secure road improvement. Hon. George H. Maxwell, director of the National Irrigation Association, talked about good roads, irrigation and forest preservation.

Col. W. L. Dickinson, of Springfield, Mass., chairman of the executive committee of the N. Y. and C. Association, to whose diligent work is due in great measure the success of the convention, told of the objects of the association and its growth since its organization.

"The New York and Chicago Road Association was organized in June, 1902," he said, "for the purpose of promoting the construction of trunk lines of improved interstate roads. As a beginning in this direction, the association is promoting the construction of a road connecting New York and Chicago, which will serve as an object lesson to the entire country of the benefits derived from such a road.

"This association does not propose to actually build this road itself, but its work will consist of arousing public interest and enthusiasm in the project, so that each state, county, city and town will build its individual link in its own locality, eventually forming a complete chain of modern road. In this manner, as can readily be seen, the cost of the construction of this road will not be a burden on any one.

"Since that trip, which attracted widespread attention, great progress has been made in the actual construction. Here in the Southern Tier of counties you may well be proud of the results you have accomplished.

"In Ohio the people have also taken up this project. In Cuyahoga county the most

progress in actual construction has been made, there only lacking about six or seven miles of modern improved road to complete a continuous boulevard entirely across the county. The counties of Lake and Lorain on the east and west will soon take up this work. Indiana has a large mileage of fine gravel and macadam roads on the line of the New York and Chicago road."

Hon. Horatio H. Earle, State Highway Commissioner of Michigan, spoke with characteristic earnestness in favor of national aid in road-building along the lines of state aid and advocated the employment of convict labor in the preparation of road material.

An address that was listened to with marked attention was that delivered by James H. MacDonald, State Highway Commissioner of Connecticut, and an authority on road construction. He said in part: "All roads attach themselves to the trunk lines ultimately. That being true, the first care of a state should be to construct its trunk lines, for the simple reason that they are the longest and accommodate the greatest amount of travel. They are also the most important because they go through the most populous business centers. An illustration of this fact is found in my own state. Where we have in Connecticut 15,000 miles of roads, we are bending our energy and expending state and town money on fourteen trunk lines, running north and south and east and west. The total mileage of these trunk lines is 1,032 miles and this mileage drains a population of 851,000 people out of a total of 920,000 in the entire state. They also touch in their course 138 towns out of a total of 168 in the state.

"The proposed trunk line between New York and Chicago touches the greatest business activities and farming enterprises in five of our large states. The grades are hardly noticeable, the line followed is direct, no difficult engineering is required nor expensive obstacles exist to overcome. The expense is, therefore, reduced to the minimum of highway improvements. It is simply to drain where necessary and to provide a smooth and firm surface. Under such conditions the cost can be quickly determined and the work begun without delay.

"State aid, which is given by New York and Pennsylvania, Massachusetts, New Jersey and Connecticut, is the only solution of the problem of highway construction. Every state on the line of this proposed trunk line should take up this matter without delay and carry it to a speedy conclusion."

Resolutions were adopted providing for a change of the proposed route in Delaware county, and extending the thanks of the convention to Colonel Dickinson for his untiring work in the interests of the association. The convention then adjourned after a few remarks by Mayor Coleman, of Elmira.

A good roads banquet was held Tuesday night in the Hotel Rathbun, covers being laid for 300. Col. Albert A. Pope, Mayor Coleman, Col. Dickinson, H. I. Earle, John F. Murtaugh and F. D. Lyon were among the speakers of the evening.

## COLUMBUS COUNCIL TAXES AUTOS.

*Special Correspondence.*

COLUMBUS, O., March 25.—By a vote of eight to seven, the Columbus city council has passed the vehicle license ordinance, which places an annual tax of \$5 on automobiles for one or two persons, and \$7.50 on those for three or more persons.

The measure takes the place of one passed two weeks ago, which was discovered to be invalid on account of a defect in the title.

## STATE AID LAW IN NEW HAMPSHIRE.

**Act Passed by Present Legislature Marks Beginning of Movement to Attract Tourists to Mountain Region—Provisions Differ from Good Roads Laws of Other States.**

A new state aid law that has just recently been passed by the New Hampshire legislature, marks the beginning of a consistent action on the part of the state to encourage and assist in the building of such state highways as will bring tourists from every part of New England and the Middle States to enjoy the scenic and climatic attractions of a region well suited to be the natural recuperation park of the Atlantic slope.

The new measure is entitled "An act to provide for state aid and for the expenditure of other public moneys in the permanent improvement of main highways throughout the state." It places the general supervision, control and direction of road improvement work so far as the state is concerned, in the hands of the governor and council; so far as incorporated towns are concerned, in the hands of the mayor and city council, and so far as unincorporated towns are concerned, in the hands of the county commissioners.

The act appropriates the sum of \$125,000 annually for six years, from the state funds, to be apportioned as follows: For every city, town and incorporated town or place, which has applied for state aid and has raised, appropriated and set apart a given sum entitling it to state aid, for each dollar so set apart by towns, and unincorporated places having a valuation of less than \$100,000, \$3; towns and unincorporated places having a valuation of \$100,000 and less than \$250,000, \$1.25 for each \$1; towns and unincorporated places having a valuation of \$250,000 and less than \$500,000, 60 cents for each \$1; towns having a valuation of \$500,000 and less than \$1,000,000, 40 cents for each \$1; cities and towns having a valuation of \$1,000,000 and less than \$3,000,000, 25 cents for each \$1, and cities and towns having a valuation of \$3,000,000 and more, 20 cents for each \$1.

While the appropriation of funds by communities for the purpose of securing state aid in road-building is optional with each community, the new law requires every town to set apart from the amount annually raised and appropriated for road work, a proportion as follows, to be used for the permanent improvement of its main highways, as distinguished from mere repair work:

Towns having a valuation of less than \$2,000,000, \$1 on each \$1,000 of valuation; towns of \$2,000,000 and less than \$3,000,000 valuation, 75 cents on each \$1,000; towns of \$3,000,000 and less than \$5,000,000, 50 cents on each \$1,000; towns of \$5,000,000 and less than \$15,000,000, 33 1-3 cents on each \$1,000; towns of \$15,000,000 and upwards, 25 cents on each \$1,000; unincorporated towns and places, \$1 on each \$1,000 of valuation.

Any town or place which raises and appropriates for the purpose an additional amount equal to one-half of its regular annual fund for permanent road work, is entitled to apply for and receive state aid, the application to be made on or before May 1, to the governor and council. The joint sum set apart by the town and state may be expended upon such highway as the governor and council, together with the local town council or board of commissioners designate, except that no part of such fund shall be spent upon any highway within the



compact portion of any city or village, except in towns of less than 2,500 population.

All work of highway improvement paid for out of the joint fund, must be performed in accordance with specifications provided by the state authorities, and after construction the improved highways lying within town limits are to be maintained by the town in which they are located. The services of a state engineer will be furnished free of charge, upon application by any town or place desiring to make improvements, but not applying for state aid.

Any part of the annual appropriation of \$125,000 that remains unused after meeting the applications from the cities, towns and counties, and paying the expenses of administration, may be used by the governor and council in making state roads to be built and maintained entirely by the state.

The act designates a number of roads to be set aside as state highways.

### SHOW COMMITTEE NAMED.

#### Licensed Makers Starting to Work for Madison Square Exhibition.

New York show matters for next winter have been brought to the fore again this week by the announcement of the appointment of a show committee by President Clifton, of the Association of Licensed Automobile Manufacturers and by the rumors of a discussion that took place a few nights ago in the clubrooms of the Automobile Club of America on the subject of an independent show. Since the fact became known during the show last January, that the licensed association had secured a two years' lease of Madison Square Garden, before any move was made by the National Association of Automobile Manufacturers to renew its expiring lease, there has been keen interest in the subject of next season's exhibitions. Two members of the show committee appointed by authorization of the Board of Managers of the A. L. A. M. at its last meeting are Col. George Pope, of the Pope Motor Car Company, and Marcus I. Brock, of the Autocar Company. The third member has not yet been selected. No details of the show policy of the association with regard to unlicensed manufacturers and parts makers and dealers are yet obtainable.

The conference on show matters at the clubrooms a few nights ago was attended by representatives of the National Association of Automobile Manufacturers, of the Importers' Salon, the New York Automobile Trade Association and also by members of the Licensed Association. No decision on the subject was reached, but hope is entertained of favorable action on the part of the club at the next meeting of the board of governors. The advisability of holding an independent show in the early winter instead of in January was discussed, while one of the big armory buildings was considered most suitable for the purpose, provided permission for its use could be secured. Should the club decide to lend its support to another show, it is said that the exhibition will be open to the world and will be along artistic lines. A committee of the club has been considering, for some time, the desirability of promoting an independent show under its auspices. Pending the decision of the club, the importers have not decided regarding a repetition of the Importers' Salon next winter.

"My love for you can never fail,"

He pleaded in dismay,

She said: "I do not doubt your tale;

I know your love will never fail,

But your motor-business may."

—Exchange.

## VANDERBILT CUP RULES.

### Preliminary Announcement by Racing Board—Race Meet Sanctions.

Preliminary announcement of the conditions governing the Vanderbilt Cup Race entries has been issued in printed form by Chairman Robert Lee Morrell, of the Racing Board of the A. A. A. Among other conditions, previously announced in these pages, it stipulates that entries must be in the hands of the race commission not later than May 15, 1905, the same to be accompanied by an entry fee of \$500. In the event of more than five entries from the United States, the Racing Board shall determine by trial, contest or otherwise, as it may provide, which of the cars may compete. If there should be more than five entries from any foreign country, the recognized club of such country shall select the five cars to compete. The race will be held between Aug. 15 and Oct. 15, 1905, the course to be announced at least thirty days prior to the date of the event. Checks for entry fee must be made payable and all communications addressed to Robert Lee Morrell, Chairman, 15 William street, New York City.

The Race Commission for 1905 consists of the Racing Board, as a whole, the donor of the cup, William K. Vanderbilt, Jr., and Rene de Knyff, member of the Sports Committee of the Automobile Club of France.

Sanctions have been granted by the Racing Board for the tournament to be held at Lakewood, N. J., April 25-29; the race meet at Brighton Beach track, Coney Island, May 6, and for the meet at the Empire City track, Yonkers, on May 30. It is announced that no reservation of dates, other than for April and May, will be made until May 1, at which time all applications in hand will be considered, and as far as possible sanctions granted, so as to avoid conflict of dates at the different tracks.

The special committee of the Racing Board, which has in hand the matter of revising the racing rules of the association, is now at work, and will report to a meeting of this board to be held prior to the meeting of the Board of Directors on April 6.

## SOUTHERN CIRCUIT PLANS.

### Six Weeks of Automobile and Auto Boat Racing Next Winter.

A well-defined winter automobile and power-boat racing circuit for the South Atlantic seaboard has been arranged for next winter, as a result of the activity of Promoter William J. Morgan, who returned to New York City last week from Cuba and Florida. The latest addition to the tournament-giving cities are Jacksonville and Miami in Florida and Nassau at New Providence.

Beginning with automobile races on the Atlantic-Pablo Beach, below Jacksonville, and auto boat events on the St. Johns River at Jacksonville, the circuit followers will go to St. Augustine, where South Beach and the St. Augustine River will furnish the courses. The Ormond tournament is next on the schedule, with the point not yet decided whether the Florida East Coast Automobile Association and the Ormond Racing Association will each hold a meet or there will be only one tournament.

Auto boat racing on Lake Worth at Palm Beach follows the Ormond-Daytona meet, and then there are to be boat races on Biscayne Bay at Miami, where it is also possible that a mile track may be built for automobile racing. The auto boats taking part

in the carnivals at the several Florida winter resorts can make the entire trip from Jacksonville to Miami by the inland waters of the Florida east coast.

After the racing at Miami the circuit followers will cross over to Nassau, New Providence, for an auto boat tournament, and from there they sail for Havana to participate in the second annual Cuban automobile race meet. Perhaps the order of these last two tournaments may be reversed.

This program gives at least six weeks of racing in the South next winter, sufficient to attract a large number of racing men and followers of the two sports of automobiling and auto boating.

Examination of the Atlantic-Pablo Beach by a committee of the newly formed Jacksonville Automobile and Motor Boat Club, accompanied by W. J. Morgan, discovered that it is in some respects even more superb than the Ormond-Daytona Beach, being as safe and fast and 100 feet wider, and extending for thirty-five miles without obstructions or soft places.

## LAKEWOOD PROGRAM.

### Eighteen Events to Be Run on Straightaway Road April 25-29.

The program for the Lakewood (N. J.) automobile tournament to be held April 25 to 29 inclusive has just been announced. It includes eighteen regular events and gymkhana contests and special match races. The races are to be held in a straightaway road course. The events, for which entry blanks can be secured from Alfred Reeves, 150 Nassau street, New York, are as follows:

Kilometer and mile road record trials for Classes A, B and C cars; American mile road championship, with flying and standing starts, for Classes A, B and C cars; two-mile standing start, open race for American gasoline stock cars with regular equipment; two-mile open race, for stock gasoline runabouts made to carry two passengers only, costing up to \$1,000, and regularly equipped; three-mile Lakewood handicap, open to all cars; five-mile American road championships, for Class A, B and C cars; five-mile Laurel handicap, open to all stock touring cars, driven by owners not actively connected with the trade, and carrying three passengers beside the driver; five-mile Dover handicap, open to all American stock cars, which may be stripped; five-mile Pines handicap, open to American and foreign stock cars, which may be stripped; five-mile amateur road championship of America; ten-mile American road championship, open to all, to be run with three-minute control at the five-mile turning point.

## MAY DAY PARADE OF A. C. A.

A meeting of the Runs and Tours Committee of the Automobile Club of America, M. M. Belding, Jr., chairman, will be held at the clubrooms, 753 Fifth avenue, New York, on Friday evening, March 31. The object of the meeting is the formulation of plans for the club parade to be held in this city the latter part of May. A schedule of runs and short tours for the summer season will also be considered.

Lost motion is not the only bad result of looseness in the joints of the steering gear; if the front wheels are permitted to get out of parallel the wear on the tires will be appreciably increased.

The Federation of American Motorcyclists has been invited by the cyclists of Waltham, Mass., to hold its next annual meeting in that city.

## NEW BRUNSWICK BILL.

## Registration and Speed Measure Pending in the Canadian Province.

Even the Canadian province of New Brunswick, that seems so remote in all things pertaining to the commercial and social life of the United States, has felt the desirability of getting into line with the numerous states on this side of the border, that have passed or are about to enact laws intended to "regulate" or "govern" the use of automobiles on the public roads.

A proposed New Brunswick law requires the registration of every automobile owned in the province, with the secretary, who, for a fee of \$10, shall register the vehicle and issue to the owner a numbered seal, of aluminum or other suitable metal, circular in form and approximately three inches in diameter, to be conspicuously displayed on the automobile.

Non-residents who are registered under the law of another state or province, are exempt from such registration provided they carry on their cars their number tag bearing the initials of such state or province.

In addition to the seal, the motor car must have, displayed on the back, so as to be plainly visible, the number assigned to it, to be in Arabic numerals, black on white ground, and not less than three inches high and each stroke not less than half an inch wide.

There are provisions regarding registration for manufacturers and dealers, and in case of previous registration, and the sale of private cars.

Speed is limited at all times to a rate that is "reasonable and proper, having regard to the traffic and use of the highway," and specifically, to a mile in six minutes (ten miles an hour), in closely built up sections, and elsewhere in cities and towns, to a mile in five minutes; outside of cities and towns or villages one may drive at the rate of a mile in four minutes, or fifteen miles an hour, except that on sharp curves and descents, and approaching and crossing bridges this must be reduced to four miles an hour.

The usual provisions regarding approaching and passing horses are incorporated in the bill, but when meeting other vehicles or a person riding a horse, the automobilist is required to pull out to the left of the center of the road, and on overtaking shall pass on the right side of other vehicles. These instructions are, of course, in conformity with the English road law, which is exactly the reverse of our own in this respect—a point that should always be borne in mind by Americans touring across the border and in the British Isles.

Brakes and lighted lamps at night are required, the lamps to have the registration numbers painted on the front glass.

Chauffeurs are required to be registered separately, and to wear an oval metal badge bearing the assigned number pinned in a conspicuous place upon the clothing.

Violation of the sections of the law pertaining to registration, seals and number tags, and to speed, makes the offender liable to a fine not exceeding \$100 for the first offense; not less than \$50 nor more than \$100 or imprisonment not exceeding 30 days for the second, not less than \$100 nor more than \$250 or imprisonment for 60 days for the third or subsequent offense.

## TESTING THREATENED IN DETROIT.

*Special Correspondence.*

DETROIT, March 26.—At the last session of the city council things looked black for the automobile manufacturing concerns of this city, who have been testing their machines on the streets, but the day was saved for

them by the cooler judgment of one of the city attorneys. On motion of Alderman Gutman, a resolution was adopted requesting the corporation counsel's office to draft an ordinance prohibiting automobile testers from using the streets, avenues and other thoroughfares of Detroit for the purpose of testing machines. The following day Chief Assistant Corporation Counsel McGrath, to whom the matter was submitted, reported to the alderman, declining to frame such an ordinance, on the grounds that it would be illegal. His opinion follows:

"Parties testing automobiles are governed as to the rate of speed and so forth, by the ordinance now in force, and the testing of machines on the streets, like the testing of buggies or horses, is a legitimate use of the streets. In my opinion prohibiting the legitimate use of the streets would be unreasonable."

## LUDICROUS MINNESOTA BILL.

## Reported Favorably by Senate Committee but Passage Doubtful.

*Special Correspondence.*

ST. PAUL, March 24.—Minnesota chauffeurs are co-operating to defeat a peculiarly antagonistic automobile bill, which was drafted by a committee of the State Agricultural Society and has been favorably reported by the committee of the Senate. Were it not for the prompt action of members of the St. Paul and Minneapolis automobile clubs, it might have been passed before this, but there is now reasonable prospect that it will be defeated, or amended so as to be unobjectionable.

Some of the provisions of the measure are rather ludicrous. One stipulates that no person shall run an automobile faster than eight miles an hour within a mile of a post-office. Chauffeurs have pointed out that there are not signboards on every cross-road in Minnesota, and that it will bother the owner of the automobile to know just when he is within a mile of a postoffice.

The bill also gives the county commissioners of the several counties, authority to regulate the speed of automobiles in their county. This will probably mean, if the bill is passed, that there will be as many speed regulations as there are counties. It further provides that no motor shall be run faster than eight miles an hour past a schoolhouse, church, pedestrian or team, or cross a dam or causeway within the state, and owners of automobiles are required to register with the Secretary of State, paying a fee of \$2.

## L'HOMMEDIEU BILL AMENDED.

*Special Correspondence.*

ALBANY, March 27.—The Senate committee on taxation and retrenchment decided last Thursday to report favorably the L'Homedieu bill, imposing a tax of \$2 per horsepower on all automobiles.

Several important amendments were made to the bill, the principal one being that which exempts all automobiles under 10 horsepower, and also motors used for trucking purposes. It is also provided that the money raised by this measure shall be turned over to the state treasurer and shall constitute a highway improvement fund.

Senator L'Homedieu says that he believes \$350,000 will be raised the first year from this tax, and he also thinks that in the course of a few years \$1,000,000 a year will be raised in this way, for highway improvements. Every advocate of good roads, Senator L'Homedieu says, should favor the bill, and he adds that anyone who can afford to own and operate an automobile, will not begrudge paying a tax of \$2 per horsepower.

## JERSEY SPEEDWAY PLANS.

## Grading of Five-Mile Course on Barnegat Bay to Begin Soon.

Of the numerous projects for big private automobile speedways in the territory surrounding New York City that have been given currency, the first to give assurance of early realization is the plan to lay out an Atlantic Coast motor speedway at Toms River on Barnegat Bay, New Jersey, a few miles south of Lakewood. Work of grading the speedway will be commenced as soon as the weather permits, it was announced this week, and plenty of financial backing is assured, it is claimed.

It is proposed to lay out a huge sports and athletic park on a tract of 4,000 acres of fine land lying high above the bay. Half of the tract will be reserved as a small game preserve, and on the other half is to be laid out a five-mile automobile speedway, 120 feet wide and with corners slightly banked. In front of a grandstand to be erected will be laid out a course two and a half miles in circumference, which will form part of the five-mile circuit, and the farthest turn of which will be but half a mile distant from the stand.

A course for auto boat racing will also be marked off in Barnegat Bay.

The property will be owned by a stock company. The Pennsylvania and the Central Railroad of New Jersey run through the tract, which is situated on the main highway between New York and Atlantic City.

## IMPORTATION OF AUTOS.

## Provisions Governing Free Entry for Touring and Racing Purposes.

*Special Correspondence.*

WASHINGTON, D. C., March 27.—An important customs circular relating to the importation of automobiles for touring and racing purposes has been prepared by the Secretary of the Treasury. Among other things it sets forth that automobiles of foreign manufacture, imported into this country by non-resident owners personally for bona fide touring purposes, are entitled to free entry under bond for a stay of three months, in accordance with a customs circular of June 20, 1902. The provision is made that such owner shall present at the time of making entry a certificate from the United States consul at the port of exportation based upon the sworn statement of the owner to the effect that said automobile is brought over for touring purposes only, that the owner is in nowise connected with any automobile business, and that the car is not to be used for any commercial or business pursuits whatsoever while in this country. The automobile may accompany the owner or come over within 30 days before or after his arrival. This privilege of free entry shall not be granted to the same machine more than once in any one year.

The privilege of free entry under bond, conditioned as required by a treasury decision of May 27, 1902, is also applicable to automobiles brought into this country by non-residents for the purpose of racing or taking part in other specific contests of automobiles, but not for display in shows or exhibitions of any kind. Such purpose shall be evidenced by the oath of the owner or his agent made before the United States consul at the port of exportation, and by him certified and presented at the time of entry.

In either of these cases where the importer has been unable to obtain the required consular certificate through no fault



of his own, the collector of customs shall have the power to waive the same upon evidence produced before him satisfying him that the said automobile was imported for touring or racing purposes only.

Automobiles to be free of duty as household effects must have been used abroad for a period of one year or more by the owner or his family. The owner's family shall be held to include his wife, children, and his parents, brothers and sisters, or any of them residing with him abroad.

Automobiles used in business pursuits abroad are not exempt from duty under paragraph 504 of the present tariff act as household effects. The period of use required by paragraph 504 does not have to be consecutive nor immediately precede the importation.

Free entry will not be accorded to an exchanged machine, which machine was not used abroad for a year or more by the present owner unless the exchange was necessarily made on account of defects in the first machine, by substitution or replacement in the usual course of business of a new automobile of same make, the same power, and of the same cost. The facts re-

## DECIDES ON CLUBHOUSE.

### Cincinnati Club Accepts Garage Plans at Annual Meeting.

*Special Correspondence.*

CINCINNATI, March 28.—At the yearly meeting of the Automobile Club of Cincinnati, held last Wednesday in the grill room of the Business Men's Club, the architect's sketch of a proposed downtown clubhouse and garage for the club, was submitted for approval by Secretary-Treasurer L. S. Colter. The plans were accepted by the club and the location on the south side of East Seventh street near Main street, was practically decided upon. The structure, front elevation of which is shown in the sketch, is to be of brick and stone, 100 by 60 feet, and will cost, it is estimated, between \$20,000 and \$30,000.

The club members are eager to erect the clubhouse and to make this possible every effort will be made to increase the membership to 200 during the next two months. During the last club year the membership grew from 28 to 115, the dues having been reduced to \$5 a year. When the member-

mobiles through small villages around Cincinnati.

Governors of the club for the ensuing year were elected at Wednesday's meeting as follows: Val Duttonhofer, Jr., George McG. Morris, Dr. L. S. Colter, Stanley Hooker and Foster Bradley. The reelection of Messrs. Duttonhofer and Colter to the presidency and secretaryship are, therefore, assured.

## SOCIETY OF ENGINEERS.

### Plans Active Campaign for Future Work—Membership Increasing.

The Society of Automobile Engineers, which was formed as the result of a meeting held in this city during the Madison Square Garden Show in 1904, is planning for an active and interesting future, and reports a rapidly growing membership. At a recent meeting a constitution and by-laws were adopted, and active work begun in earnest. It is the object of the society to hold regular meetings, at times to be announced, before which interesting and instructive papers on automobile engineering and kindred topics will be read and lectures delivered by well-known authorities in the profession.

Under its constitution, membership of the association shall be graded as follows: Members, honorary members, associates and juniors; members and honorary members shall be professional automobile engineers, constructors or designers; associates to include all suitable persons connected with the design or production of automobiles or their component parts; juniors to include all suitable persons interested in the development of the automobile. The initiation fee for a member is \$15, and that of an associate is \$10; the annual dues of members and associates are \$10, while the initiation fee of a junior is \$5 and annual dues \$10.

The association now has thirty members, and this number it expects to double within the next thirty or sixty days, at which time a meeting will be called for the election of officers and appointment of the several standing committees. Applicants admitted prior to this meeting will be regarded as charter members, and no initiation fee will be charged.

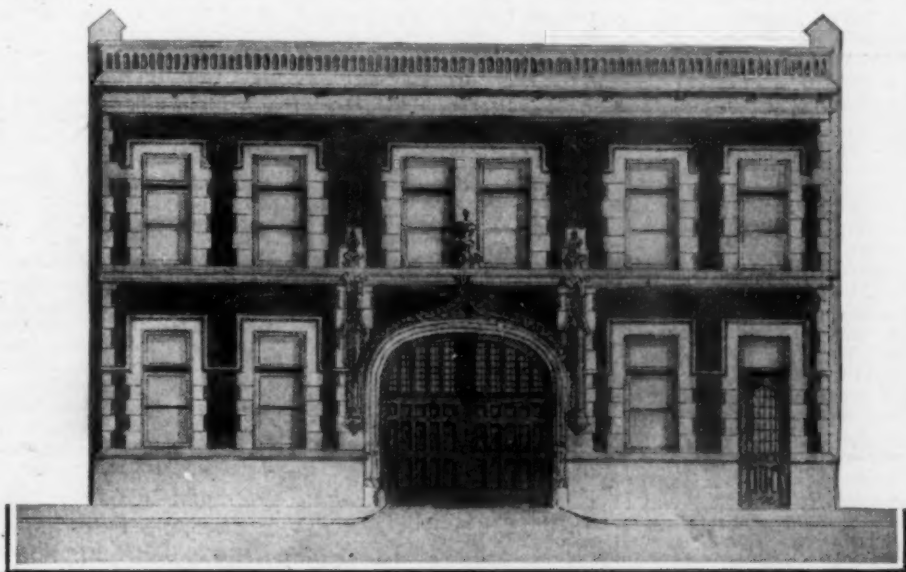
The society is patterned somewhat along the lines of the Society of Mechanical Engineers, and the American Institute of Electrical Engineers, and is now officered by some of the foremost automobile engineers in the country. The list of officers follows:

A. L. Riker, president; Henry Ford, first vice-president; John Wilkinson, second vice-president; E. T. Birdsall, secretary-treasurer. Managers: A. H. Whiting, L. T. Gibbs, H. M. Swetland, H. P. Maxim, H. W. Alden and H. Vanderbeck.

### HUTTON ADDRESSES MOTORISTS.

Prof. F. R. Hutton, of the Columbia University, delivered an interesting lecture before the New York Motor Club, in Bretton Hall, Broadway and Eighty-sixth street, last Thursday evening, using for his subject the "Evolution of the Motor Car." The history of the automobile was given from its inception, and the address illustrated with stereopticon views. Prof. Hutton is a member of the Technical Committee of the club, and will deliver another lecture on April 13.

At the last meeting of the Board of Directors, B. D. Gray was elected to membership on the board, to fill the vacancy caused by the resignation of Angus Sinclair. Mr. Gray is a well-known engineer, and has been a member of the Technical Committee of the club since its organization.



FRONT ELEVATION OF CINCINNATI CLUB'S PROPOSED NEW HOME.

lating to the exchange shall be embodied in the declaration.

The purpose of the circular is to make clear certain points in existing laws that have puzzled collectors of customs and been a source of much annoyance to foreign automobilists.

### PHILADELPHIA CLUB RUN POSTPONED.

*Special Correspondence.*

PHILADELPHIA, March 27.—Out of deference to the anti-automobile sentiment now so prevalent in New Jersey, and especially along the Camden-Atlantic City route, the Automobile Club of Philadelphia, whose committee on towns and runs was engaged in promoting its annual spring run over the course named, has decided to indefinitely postpone the event. This action was taken, not from any idea that there would be any room for complaint against the entrants for not fully complying with the Jersey speed regulations, but because the club does not desire to furnish unattached motorists with an excuse for indulging in speed excesses which might be attributed to A. C. of P. members.

ship has reached 200, subscriptions for the clubhouse will be started.

A season of great activity was discussed at Wednesday's meeting. President Val Duttonhofer, Jr., offered to present a prize cup for a race open only to club members, and also suggested a floral parade, a hill-climbing contest, and the adoption of a new set of rules to be observed by the members when driving with the object of avoiding accidents and friction with the police. He thought the club should establish a complaint bureau and write to those owners against whose cars complaints of reckless driving were lodged, asking them to cooperate with the club in conforming with the law, which is felt to be reasonable.

There are 300 owners of automobiles in Cincinnati, and earnest efforts will be made this spring to induce everyone of them to ally himself with the club for the accomplishment of its objects. Among the recent applications received is that of John J. Ryan, the turfman, who is also an automobile enthusiast.

The club also means to pit its strength against the efforts of the Farmers' Institute to secure the enactment of an anti-automobile law, and against the growing abuse of charging tolls for the passage of auto-

## LONG ISLAND A. C. ACTIVE.

### Inaugurates Series of Weekly Runs to Be Continued All Summer.

The Long Island Automobile Club has inaugurated a series of weekly tours or runs to be continued throughout the season, the first of which was held on March 19, but owing to the disagreeable weather this was not well attended. The second was held on Sunday, March 26, the attendance showing a marked improvement over the first. Among those participating in this were President Wilmarth, L. M. Allen, A. R. Pardington, Raymond Healey, Jerome Edwards, L. A. Hopkins, F. G. Webb, Z. N. Allen, W. Adriance, H. M. Brigham, Frank Stephenson and J. Ashbury, all carrying guests. No mishaps were reported, but the muddy condition of the roads prevented several from making the entire trip. Leaving the clubhouse, 360 Cumberland street, Brooklyn, the run was made to Bayshore, where luncheon was served at the Cortland House, in relays, from one to three o'clock. The run announced for Sunday, April 2, will have for its destination the Manhasset Bay Yacht Club, Port Washington, the start to be made from the clubhouse at ten o'clock in the morning.

As an incentive to touring, and the frequent participation on the part of members in the regularly called runs of the club, four prize cups have been donated by individual members. The Mesereau Mileage Mug will be awarded the member scoring the largest number of miles between March 15 and October 15, 1905, the recording instruments to be read on or after March 15, and on or before October 15. The Adams Attendance Prize will be given for the most regular participant in runs and tours for the same period, and the Mackay Meandering Memento will be the prize of the member having driven his car in the greatest number of states, territories or foreign countries during the season ending October 15. The Economy Prize of the Long Island Club is offered the member who shall have completed the Brooklyn-Southampton tour, carrying his quota of passengers, at the least expenditure per capita for fuel, lubricants and repairs. This tour is scheduled to start on June 10, the return trip to be made the following day, and the award to be made on the two days' record. This is the club's first effort in promoting a tour of the kind, and it will doubtless prove a most valuable one to participants.

The Runs and Tours Committee for 1905 is composed of A. R. Pardington, chairman; Charles Jerome Edwards, secretary, and Carl H. Page.

The club members are enthusiastic over the plans for the season, and the membership roll is steadily increasing. Among its recent additions are David A. Sullivan, W. C. Darmon, E. J. Willis, C. J. Duerr, N. T. Hayward, Thomas D. Carpenter and Walter P. Nollman.

## BOAT BUILDERS' ELECTION.

### Executive Committee Names Officers and Committees for Ensuing Year.

At a meeting of the Executive Committee of the National Association of Engine and Boat Manufacturers, which was held in the office of the association at 314 Madison avenue, New York, on Friday evening, March 24, the following officers were elected: John J. Amory, president; H. A. Lozier, Jr., first vice-president; Charles A. Strelinger, second vice-president; Henry R. Sutphen, third vice-president; J. S. Bunting, treasurer, and Hugh S. Gambel, secretary.

The following committees were announced to serve for the ensuing year: Legislation, J. S. Bunting chairman; A. Snyder, Eugene A. Riotte, and J. M. Truscott; transportation, H. A. Lozier, Jr., chairman; C. L. Snyder, H. N. Whittelsey, J. B. Smalley; exhibition, Henry R. Sutphen, chairman; J. S. Bunting, A. Massenat, S. J. Matthews; agencies, the executive committee as a whole; advertising, H. N. Whittelsey, chairman; Henry R. Sutphen, A. Massenat; technical, Charles A. Strelinger, chairman; A. Snyder, H. N. Whittelsey. The executive committee is composed as follows: John J. Amory, chairman; class of 1908, J. B. Smalley, James Craig, Jr., C. L. Snyder, Eugene A. Riotte, and A. Massenat; class of 1907, John J. Amory, H. A. Lozier, Jr., J. S. Bunting, H. N. Whittelsey, Charles A. Strelinger; class of 1906, S. J. Matthews, A. Snyder, H. H. Brautigan, Albert E. Eldredge, Henry R. Sutphen.

## MEETING OF MASS. CLUBS.

### Called by Bay State Association to Plan for United Work.

*Special Correspondence.*

Boston, March 27.—The Bay State Automobile Association has undertaken the task, which has been tried several times before with little success, of uniting the various automobile interests and organizations of Massachusetts. To this end President Lewis R. Speare has sent out invitations to all the clubs and associations of the state, asking them to appoint delegates to attend a meeting to be held at the rooms of the Association in Hotel Lenox, Boston, Saturday afternoon, April 1. Favorable replies are being received, and it is expected that there will be a representative gathering. The officers and directors of the Association will act as hosts, and in the evening the visitors will be entertained at a club night.

At the recent automobile show the project of a state association, or some sort of mutual understanding among the organizations of the state was broached and met with favor from members of many of these organizations. The opinion was expressed that the automobile interests would accomplish much more if they presented a united front than if they worked independently, as has been the case in the past. If it is decided to form a state organization, or to work in unison, one of the first things that will be attended to will be legislation. At the state house this year the automobile interests have been well represented, but they have been represented separately and with no uniform plan of action. It is not proposed to act on the aggressive, but merely to unite for defensive purposes, and for the promotion of the good of the whole.

The trouble with proposed state organizations in the past has been that they were to be subordinate to some national body. These propositions did not meet with favor, but it is thought that an independent state body will succeed, and will be a great benefit to the sport and to the trade also.

The "gentle spring" is an excellent time to look for and stop the rattles, squeaks and knocks that too often accompany the progress of a car after a season's running. Loose iron-work about the body, dry springs and shaky levers are apt to be responsible for a good deal of noise, and should be attended to. Everything loose should be tightened sufficiently to stop any tendency to rattle. Springs, the source of many persistent but mysterious squeaks, should be lubricated by prying apart the leaves with a screw-driver or similar instrument and inserting a mixture of graphite and grease.

## BURLINGTON CLUB BANQUET.

### First Annual Affair a Success—Secretary of State Guest of Honor.

*Special Correspondence.*

BURLINGTON, Vt., March 25.—The first annual banquet of the Burlington Automobile Club was held on Tuesday evening, March 21. The table was laid in the main dining hall of the Van Ness Hotel, was largely attended and proved to be a most enjoyable and successful event. An excellent string band furnished music for the diners. Ex-Mayor D. C. Hawley, president of the club, presided as toastmaster, and after a brief address on the success of the club and its intentions for future activities, he was roundly applauded for his humorous references to amusing incidents in the experiences of some of those present.

Secretary of State, F. G. Fleetwood, was present as guest of honor, and was introduced as the first speaker. He disclaimed any knowledge of automobiles technically, but expressed a willingness to throw all the light possible on the Vermont automobile law. At this he was taken at his word, and several minutes were devoted to answering the queries of machine owners present.

A number of interesting speakers followed the Secretary, and these in turn were followed by a round of story-telling by a number of members at the expense of each other, adding much to the jollity of the occasion.

The committee in charge of arrangements was composed of: Col. H. W. Hall, Dr. J. E. Taggart, Dr. A. S. C. Hill, Capt. E. P. Woodbury and B. L. Kent.

At the conclusion of the banquet a short business meeting was held, and a resolution of thanks was extended to Secretary of State Fleetwood for having honored the club by his presence, and the information he had given the members on the automobile law. Several applicants were also admitted to membership.

There are about fifty machine owners in Burlington, nearly all of whom are members of the club.

## NEW AUTO BOAT ASSOCIATION.

### Builders Organize in Boston to Promote the Sport and Industry.

*Special Correspondence.*

Boston, March 27.—At a meeting last Friday evening, at the Hotel Lenox, the committee that was appointed at the recent show to consider plans for a New England or an eastern power boat association, reported favorably, and it was decided to form the Manufacturers' and Builders' Power Boat Association.

The first step in this direction was taken at a gathering of the prominent exhibitors in Mechanics Building during show week. The proposition was then discussed, and though most of those interested are members of the National Association, it was thought to be desirable to have a more local body. The committee that was then appointed consisted of Chester I. Campbell, J. A. Murray, of Murray & Tregurtha, of South Boston; George F. Lawley, of George Lawley & Sons; J. H. Schoonmaker, of the Fairbanks Company, and E. Saunders, of the F. Gerry Emmons corporation. This committee presented a constitution and by-laws which were adopted. The object of the association is to promote the general interests of power boating both for sport and pleasure. The next meeting will be held Thursday evening, April 5.



## Rapid Growth of Milwaukee Trade.

*Special Correspondence.*

MILWAUKEE, Mar. 25.—After last season's unprecedented activity in the sale of automobiles, Milwaukee dealers are looking forward to the trade of 1905, confidently believing that the disposal of cars will be increased 50 to 100 per cent. This optimistic forecast is based on the large number of orders which have been booked for spring delivery, and on the assumption that prejudice against the automobile has been practically eliminated.

According to local dealers, the season of 1904 was the first in the history of the automobile industry in this territory that might be termed profitable. This condition may be ascribed to a preference for horses on the one hand, and to Teutonic conservatism on the other. A considerable number of Milwaukee's wealthiest citizens point with pride to their well-bred horses and palace-like stables, and it has always been a difficult matter to persuade this class of equine admirers to accept an invitation to enjoy an auto ride along the magnificent driveways of which Milwaukee justly boasts.

Owing to the indifference with which Milwaukeeans regard innovations, the local agents have been compelled to exercise a great amount of perseverance and patience. One of the dealers, in discussing the situation recently, said that the growth of the automobile trade during the last four years had been slow but steady. "For a long time," he continued, "buyers in this locality looked with suspicion on the automobile, believing it to be a good vehicle to use in case one did not contemplate making a round trip, but intended merely to go one way. However, after these skeptical people, who are 'from Missouri,' had been convinced that the automobile could be used in making the return trip as well, it was a comparatively easy matter to make headway."

On account of Milwaukee's geographical position, it is the distributing point for a wide area, and now that a French touring car is to be handled here, many buyers in this field will not be compelled to place their orders in Chicago in case they desire a machine of foreign manufacture.

### IMPORTANT AUTOMOBILE AGENCIES.

If the number of agencies may be regarded as an index to automobile trade development, Milwaukee is about to enter upon an exceedingly active season. Within a comparatively short period six large concerns and several smaller ones have been established for the purpose of conducting a general automobile business.

The Jonas Automobile Company, which is located at 726 National avenue, probably enjoyed a greater degree of prosperity than any of the other local dealers, it having disposed of 103 cars—83 Cadillacs, 18 Peerless and 2 Autocars. The building now occupied is a two-story structure, yielding a floor space of 9,000 feet, but it is the intention of the firm to make an addition which will double the capacity. Mr. Jonas says that the eminently successful season of 1904, together with the fact that a considerably larger number of orders have been taken up to the present time as compared with the corresponding period of 1904, is indicative of greater possibilities.

The Norton Automobile Company possesses one of the most complete and up-to-date garages in the West. In appearance it resembles the old-style English inn, and is one of the largest garages in the city, there being two floors 60 by 120 feet each. The first floor is devoted to an office and salesroom, while the lower floor is used as a repair shop and storage room. The build-

ing was not completed last season until the first of August, but despite the handicap of a late start Mr. Norton says that the business transacted met his expectations. In addition to handling the Ford, this company has secured the agency for the Mors, a 50-horsepower four-cylinder touring car, the first French machine to be handled in Wisconsin. This season a full line of sundries will be displayed.

### WEBER AGENCY FOR POPES.

The Orlando F. Weber Company, 321-325 Fourth street, enjoyed a profitable year. This concern was formerly in the bicycle business, but in 1902, realizing the wide field for exploitation presented by the automobile industry, established an agency for the purpose of handling Pope cars, fifty-three of which were sold last season. In addition to the Pope-Toledo, Pope-Hartford, Pope-Tribune and Pope-Waverley, the agency for the Buick has been secured. At a recent meeting of the board of directors the following officers were elected: Orlando F. Weber, president; A. F. Solliday, vice-president, and Alfred Reeke, secretary and treasurer. The company was incorporated this winter with \$50,000 capital stock.

The Bates-Odenbrett Company, which moved into new quarters last season, had a good trade, disposing of seventy cars. This concern carried the greatest variety of cars, the list comprising the Winton, Packard, Northern, Franklin, Oldsmobile and Columbia. During 1905, however, it will handle the Winton and Packard only.

The J. L. Kunz Machinery Company, 484 Market street, claims the distinction of having built the first automobile that appeared on the streets of Milwaukee seven years ago. The Kunz Company, in addition to manufacturing automobiles, maintains a salesroom and repair shop. Last year it disposed of twelve cars of its own make.

The Knox Automobile Company, which is located at 187 Wisconsin street, began business in this city in the fall of 1903, and since that time has done a large volume of business. In 1904 it sold forty Knox machines, of the various models.

### STUDEBAKER ELECTRIC GARAGE.

A newcomer in the field that is likely to make other dealers look to their laurels is the Studebaker Company. It is located in a new building at the corner of Third and Wells streets. There are three floors of 50 by 150 feet, the main floor being used for battery charging and repair shop, while the top floor will be used as a storage room. Notwithstanding the fact that the streets of Milwaukee are well adapted to the use of electric vehicles, few have been sold. It is probable now, however, with the Studebaker Company handling electric vehicles almost exclusively, that cars of this motive power will acquire more popularity. In order to induce buyers to purchase electric cars a number of charging stations will be established in different parts of the city and surrounding country. Seven of these stations have already been established between Milwaukee and Chicago. The Studebaker Company will display the Studebaker gasoline and electric, the Columbia gasoline and electric, the Buffalo electric, and the Royal electric. F. G. Curtis is president of the company, J. G. Zimmerman secretary and treasurer, and W. L. Hibbard sales manager.

The Curtis Automobile Company was incorporated January 4, 1905, and has established temporary quarters at 312 Wells street. The Mitchell runabout and touring car will be handled exclusively. The Curtis

Company will aim to overcome the necessarily small revenue yielded by the sale of popular-priced machines by an unusually large volume of business. It is the intention of the management to open a new garage on either Grand avenue or Wisconsin street about the middle of March or the first of April.

Another recent incorporation is that of the Franklin Automobile Company, which has fitted up showrooms at 189 Third street. The cars which will be displayed range from a 12-horsepower light roadster to a 30-horsepower touring car, all of which are equipped with a four-cylinder air-cooled engine. Mr. Ramien is secretary and treasurer.

## MINNEAPOLIS GETTING BUSY.

### Dealers' Association to Incorporate—Local Agencies and Their Lines.

*Special Correspondence.*

MINNEAPOLIS, March 25.—At a meeting held recently, the Minneapolis Automobile Dealers' Association practically decided to file articles of incorporation. The association will be active in promoting runs and contests of different kinds, and proposes as a special feature of the season now opening to hold a race meet at the state fair grounds in the early summer.

With the approach of the new season, the old local dealers are preparing for an increased business, and new ones are entering the field. The following firms will endeavor to capture the trade of this section for their respective cars:

Winston & Walker, 709 Hennepin avenue; Locomobile and Oldsmobile.

G. W. Caplin, 424 S. 5th street; Royal Tourist and Baker electrics.

Haynes Automobile Company, 44 S. Seventh street; Northern and White.

Moulton-Jordan Motor Car Company, 316-322 Fourth avenue, South; Peerless and Franklin.

Northwestern Motor Vehicle Company, 219-221 S. Sixth street; Elmore, Knox and Columbia.

George L. Gillette, 907 Nicollet avenue; Reo and Premier.

Pence Automobile Company, 717-719 Hennepin avenue; Cadillac, Pope-Toledo, Autocar, Buick, Stevens-Duryea, Packard, Waverley electrics and Ranier broughams and trucks.

Barclay Automobile Company, 907 Nicollet avenue; Thomas.

Walter G. Benz, Ford.

A. F. Chase & Company, 418-420 Third avenue, South; Maxwell.

A. C. Bennett, Winton.

Great Western Cycle and Auto Company, 612-623 First avenue, South; Rambler and Marion.

Smith & Zimmer Company, 18-22 Hennepin avenue; The Glide.

Minneapolis has experienced but five years of automobilism, and bids fair to become as prominent in this line as she was in cycling but a few years ago.

The Italian Automobile Club has fixed the following program for this season: May 15, 16 and 17, Touring Competition at Milan; July, date not yet definitely settled, Mont Cenis Hill Climb; August 15, Auto-boat Race at Livorno; September 8 to 10, Brescia Meeting, power boating on the Garda Lake; September 11 to 17, Meeting at Padua, power boating at Venice; September 20 to 21, power boating on the Lago Maggiore; September 24, Hill Climb near Florence.

## AMERICAN AND FOREIGN AUTOMOBILE AND AUTO-BOAT FIXTURES

- March 27-April 5.—Fifth Annual Washington Automobile Show, Light Infantry Armory. Washington Auto. Dealers' Assn.  
 April 1.—Tests of Muffler Efficiency, Paris, A. C. of France.  
 April 2-16.—Monaco Motor Boat Fortnight.  
 April 3-10.—Lightweight Motorcycle 1,000-Mile Trials. Auto Cycle Club of Great Britain.  
 April 9-Oct. 28.—International Transportation Exhibition, Milan, Italy.  
 April 10-15.—Denver Automobile Show, Coliseum Hall.  
 April 14-24.—Automobile Week at Nice, France.  
 April 20-21.—Auto Boat Meeting at Cannes, France.  
 April 23-Nov. 1.—International and Motor Exhibition, Liege, Belgium.  
 April 24.—Race Meet at Lakewood, N. J. Lakewood Motor Club.  
 April 29-May 7.—First National Automobile and Bicycle Exhibition, Geneva, Switzerland.  
 April 29-May 7.—Motorcycle Tour of Motor Cycle Club of France.  
 May.—Industrial Vehicle Trials, Paris, A. C. of France.  
 May 1-15.—International Auto Boat Race for Mediterranean Cup. A. C. of France.  
 May 6.—Race Meet at Brighton Beach, Coney Island. Brighton Beach Racing Association.  
 May 6.—Hill Climb of Auto Cycle Club, Fernhurst, England.  
 May 7-21.—Second Annual Auto Show, Buda-Pest, Hungary. A. C. of Hungary.  
 May 11-13.—Reliability Trials of Scottish A. C., Scotland.  
 May 11-25.—Automobile Exhibition, Stockholm, Sweden.  
 May 14.—International Motorcycle Race, France. Motor Cycle Club of France.  
 May 12 or 19.—English Quarterly 100-Mile Trials. A. C. of Great Britain.  
 May 13-22.—International Touring and Endurance Contest for Loiret Cup.  
 May 15.—Vanderbilt Cup Entries close.  
 May 20.—Race Meet at Morris Park Track, New York.  
 May 20.—Motorcycle 200-Mile Trial, England. Motor Cycling Club.  
 May 30.—Race Meet, Overland Park, Denver.  
 May 30.—Auto Boat Races, Manhasset Bay, Long Island Sound.  
 May 30.—British Gordon Bennett Eliminating Trials, Isle of Man. A. C. of Great Britain.  
 May 30.—Empire City Track Race Meet.  
 June.—French Eliminary Trials for Gordon Bennett Race.  
 June 1-7.—Race for Liedekerke Cup, Belgium. A. C. of Belgium.  
 June 4.—Auto Boat Race at Valenciennes, France.  
 June 15.—Gordon Bennett Cup Race, France.  
 June 18.—International Motorcycle Cup Contest, England. Auto Cycle Club.  
 June 26.—Mount Cenis Hill Climb, France.  
 June 29-30.—Auto Boat Races, Kiel, Germany. German A. C.  
 July 2-3.—Mile and Kilometer Trials, France.  
 July 3-7.—Auto Boat Trials, Southampton, England. A. C. of Great Britain.  
 July 7.—Gordon Bennett Race, France.  
 July 8.—Motorcycle Consumption Trial, England. Auto Cycle Club.  
 July 8-9.—Mont Ventoux Hill Climb, France.  
 July 9-22.—Ostend Automobile Meeting, Belgium.  
 July 10-20.—English Auto Boat Carnival, English Channel and Thames River. A. C. of Great Britain.  
 July 11.—Start of Glidden Trophy Tour, New York.  
 July 11-16.—Mont Cenis Hill Climb, France.  
 July 15.—Calais-Ramsgate Auto Boat Race, English Channel. A. C. of Great Britain.  
 July 19.—Automobile Speed Trials, Brighton, England. A. C. of Great Britain.  
 July 27-29.—Blackpool Automobile Races, England.  
 July 30.—Circuit des Ardennes, France. A. C. of France.  
 Aug. 6-9.—Paris-Trouville Auto Boat Race, River Seine, France. A. C. of France.  
 Aug. 10.—Gaston Menier Auto Boat Race, Trouville. A. C. of France.  
 Aug. 10-16.—Herkomer and Bleichroder Races, Munich, Bavaria.  
 Aug. 11.—Anthony Drexel Cup for Auto Boats, Trouville, France.  
 Aug. 11-18.—English Quarterly 100-Mile Trials. A. C. of Great Britain.  
 Aug. 12.—International Cup for Auto Boats.  
 Aug. 14-19.—Motorcycle 1,000-Mile Reliability Trials. Auto Cycle Club of Great Britain.  
 Aug. 19.—Auto Boat Cruise, Albany to St. Lawrence River.  
 Aug. 19.—English Van Trials, Light and Heavy Vehicles. A. C. of Great Britain.  
 Aug. 24-26.—Auto Boat Races for A. P. B. A. Challenge Cup, Chippewa Bay.  
 Sept.—Brescia Automobile Meeting, Italy.  
 Sept. 1.—Lake Geneva Auto Boat Races, Switzerland.  
 Sept. 11.—Harmsworth Cup Auto Boat Race, England.  
 Sept. 12-14.—Auto Boat Meet, Lake Luzerne, Switzerland.  
 Sept. 14.—English Tourist Trophy Competition, Isle of Man. A. C. of Great Britain.  
 Sept. 18-Oct. 3.—English Reliability Trials. A. C. of Great Britain.  
 Oct. 1.—Chateau-Thierry Hill Climb, France.  
 Oct. 15.—Gailion Hill Climb, France.

## NEW STUDEBAKER FACTORY.

### Foundations Laid for Huge Automobile Erecting Plant in South Bend.

#### Special Correspondence.

SOUTH BEND, IND., March 27.—Work on the new building to be devoted to the manufacture of automobiles, which is being constructed by the Studebaker Automobile Co. in this city, is progressing favorably. Excavations have been made and basement foundations are now being laid. The building when completed will be four stories high with basement, and will measure about 170 by 250 feet, thus providing one of the largest factory buildings in the country for this class of work. The power employed will be electricity, and a majority of the machines will be operated by separate detached motors. The equipment will be first-class in all respects and fully up to date; in fact, it is intended to make this one of the most complete automobile factories in the United States or elsewhere. Here the entire output of the Studebaker Automobile Co. will be built, including a full line of electric runabouts, stanhopes, phaetons, express and delivery wagons, as well as gasoline touring cars. It is expected to occupy the new building by the first of June.

Prospects for spring trade are excellent and orders now in are pushing the company to the limit of its present capacity.

The retail dealers of the city are all very enthusiastic over the outlook for business this spring. W. H. Barger, agent for the Winton, Cadillac and others, who conducts one of the finest garages in the Middle West, is exceedingly optimistic, his only fear being that people will delay ordering until late in April, and then have to wait until May or June for delivery of their cars, owing to the rush in the factories at the present time.

### CLUB SUSPENDS FAST DRIVER.

#### Special Correspondence.

PHILADELPHIA, March 27.—The outcome of the attempt of Manager Kelsey, of the local Maxwell branch, to make a 1,000-mile

non-stop run with his 8-horsepower runabout, was unsatisfactory in many respects. The result, however, showed that Mr. Kelsey's confidence in his little car was not entirely misplaced, for despite the fact that a dismal northeaster prevailed during almost the entire run, the machine finished the 1,000 miles in 74 hours and 35 minutes. The motor, however, was inadvertently stopped on two occasions, but immediately restarted, the stoppage being due to no defects in the engine itself.

The time consumed in making the run, indicated that the local speed regulations had been violated, and the matter was forthwith taken up by the Automobile Club of Philadelphia, of which Mr. Kelsey is a member. The club, by the way, only recently declared in opposition to all trials or tests in which the local or state speed laws are violated. The Kelsey case was brought before a special meeting of the Board of Governors on Saturday last, and after a long discussion of the details he "was suspended from membership for a period of thirty days." Incidentally the Board gave Kelsey a severe "raking over the coals" for his reckless driving over the city's most prominent thoroughfare, especially as he was fully cognizant of the club's attitude on the question of speed violations. Kelsey's defense was that he had made no special effort to attain speed during the test, his whole attention being given to keeping his engine going.

## WHITE TO BUILD.

### Cleveland Company Buys 17-Acre Tract for Big New Plant.

#### Special Correspondence.

CLEVELAND, March 27.—The White Sewing Machine Company is the latest to make known the fact that it is planning the erection of a big, new plant. This may not be done this year, but it will come in the near future, and the plant will be one of the largest in Cleveland, combining both automobile and sewing machine manufacture.

The announcement came out through the purchase by the company, of a tract of seventeen acres of land adjoining Gordon Park

and extending from the Lake Shore & Michigan Southern Railway to St. Clair street. It is in a district heretofore used exclusively for residence purposes, and the site is said to have cost more than \$100,000. The frontage on St. Clair street and the tracks is about 500 feet and the depth is 2,000 feet. The company also has under option, ten acres adjoining this property.

Thomas H. White, president of the company, stated that it had not been definitely decided whether the plant would be built this year or not. Plans have not yet been made but they will be considered soon. The White company has been cramped for space for a number of years, and from time to time has added to its facilities by renting space in various parts of the city. At present the company has six factories in three different localities. Three buildings are located on Champlain and Canal streets; one section of the Whitney power block is occupied by the company; the body department is conducted in the factory of Theodore Kuntz; and the upper floors of the White garage on Rockwell street are used for assembling and finishing. Naturally this arrangement is expensive and unsatisfactory.

## RECENT INCORPORATIONS.

Southern Automobile Co., Nashville, Tenn.; capital \$10,000; to deal in automobiles. Incorporators, John T. Landis, Lulan Landis, J. Roy Boone, J. W. Bell and B. F. Bell.

Minneapolis Automobile Dealers' Association, Minneapolis; capital \$1,000. Incorporators, E. H. Moulton, Jr., H. E. Pence and Theodore C. Jordan.

Florida Automobile Observation Co., Jacksonville, Fla.

Motor Touring Car Co., New York; capital \$25,000. Directors, Florence M. Fox, C. A. Sheehan and F. A. Fox.

Eastern Motor Car Co., New York; capital \$100,000. Directors, Arthur C. Reeves, Charles Gast and W. P. Silver.

Twin City Motor Livery Co., Minneapolis; capital \$10,000; to conduct automobile livery. Incorporators, H. G. Goosman, E. G. Choate and Byron G. Baker.